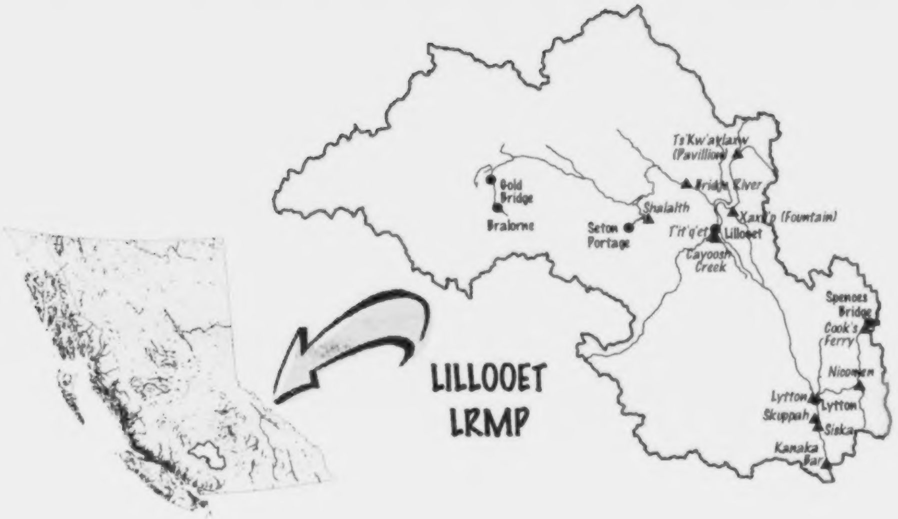
DRAFT LILLOOET
LAND AND RESOURCE MANAGEMENT PLAN


LILLOOET
LRMP
Gold Bridge
Bralorne
Seton Portage
Shalalth
Bridge River
Ts'Kw'aylaxw (Pavillion)
Xaxli'p (Fountain)
T'it'q'et
Lillooet
Cayoosh Creek
Spences Bridge
Cook's Ferry
Nicomen
Lytton
Lytton
Skuppah
Siska
Kanaka Bar

Ministry of Sustainable Resource Management

22 July, 2004

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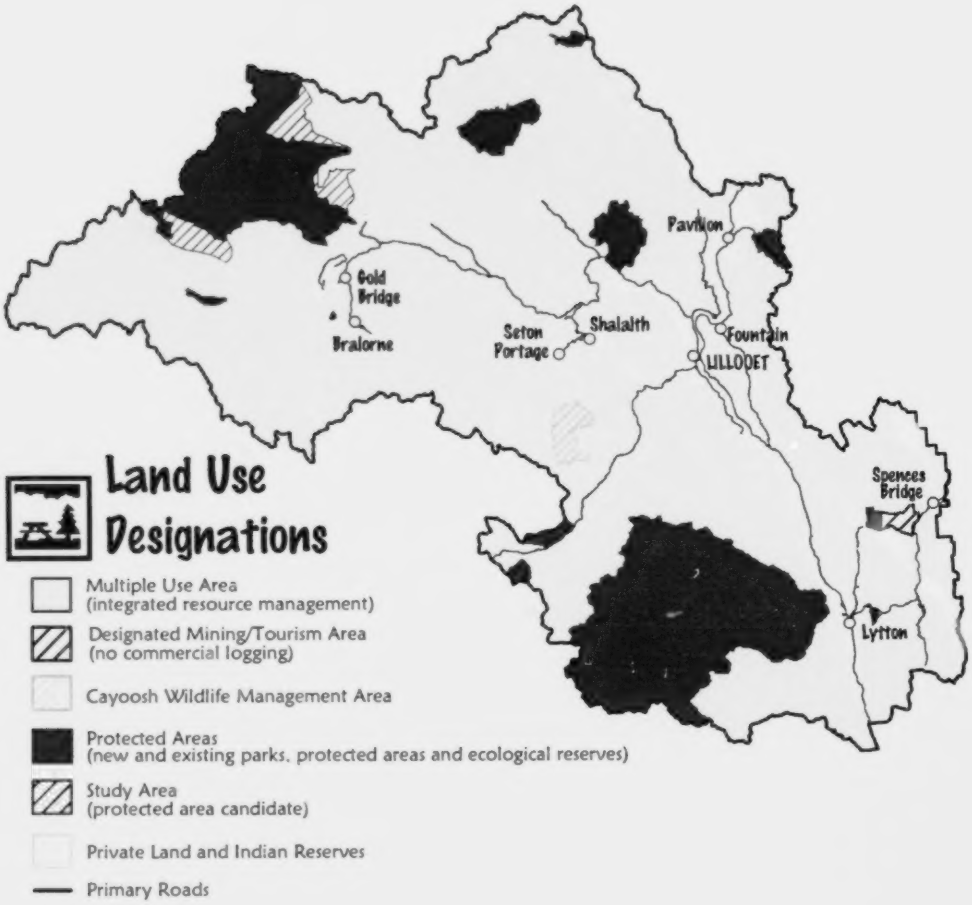
Note to Readers

This draft of the Lillooet Land and Resource Management Plan was prepared by the Ministry of Sustainable Resource Management (MSRM) to support government's consultations with First Nations.

It differs from discussion drafts released in December 2001 and March 2002 in that it reflects new, results-based regulations (e.g., *Forest and Range Practices Act*); it accommodates new policies (e.g., two zone system for minerals; working forest initiative; Heartlands Strategy); it balances more evenly among economic, social and environmental components; and it is shorter and less prescriptive.

Following consultations with First Nations, the draft will be revised and submitted to Cabinet for review and approval.

Lillooet Land and Resource Management Plan
Land Use Designations


Gold Bridge
Bralorne
Seton Portage
Shalalth
Pavilion
Fountain
LILLOOET
Spences Bridge
Lytton
Land Use Designations
Multiple Use Area (integrated resource management)
Designated Mining/Tourism Area (no commercial logging)
Cayoosh Wildlife Management Area
Protected Areas (new and existing parks, protected areas and ecological reserves)
Study Area (protected area candidate)
Private Land and Indian Reserves
Primary Roads

Executive Summary

Once approved by Cabinet, the *Lillooet Land and Resource Management Plan* (Lillooet LRMP) will provide strategic direction for the management and use of all provincially administered lands and resources in the Lillooet area for the next ten years. Its aim is to promote economic development, foster stable communities and protect major ecosystems. The plan supports results-based regulations and is consistent with provincial land-use policies (e.g., *Forest and Range Practices Act*; the working forest; the two-zone system for mineral resources).

The plan is organized around the three dimensions of sustainability: economic, social and environmental. It documents resource management issues identified by the public and provides appropriate direction to address these issues through goals, objectives, strategies, measures of success and targets. The map on the facing page shows the main land-use designations. Maps in the text show where specific management direction applies.

Multiple use areas (i.e., lands outside protected areas) are open to resource development and commercial uses including: forestry; tourism; agriculture; grazing; mining; energy; public works; and development of Crown land and water.

In the Southern Chilcotin Range, three areas (totalling 14,600 hectares) will be designated for mining and tourism use, but closed to logging, in order to optimize resource development. A management plan, guided by the 2004 Mining/Tourism *Memorandum of Understanding*, will be prepared early in the implementation of the Lillooet LRMP.

Local communities and First Nations identified issues related to culture, history, visual landscapes, transportation, access, and areas for community development. Recognition and management of these issues contributes to social sustainability. A *Memorandum of Agreement* (between Lillooet and Lytton communities, forest economic interests and the Province) and a Government to Government *Protocol Agreement* (between the St'at'imc Chiefs Council and the Province), both signed in 2004, are intended to maximize local benefits of plan implementation.

Environmental values are managed wherever they occur. The plan provides direction for fish habitat, riparian areas, wildlife, species at risk, and forest and grassland biodiversity. Planning allowances will be applied to the timber harvesting land base to enhance the conservation of grizzly bears, mule deer winter range and spotted owls. A new, 5,800 hectare wildlife management area in the Cayoosh Range will benefit mountain goats.

Protected areas provide important habitat for fish and wildlife as well as opportunities for public recreation and some commercial uses (e.g., grazing; tourism). New protected areas will be legally established once First Nations' interests have been identified and addressed. Taken together, new and existing protected areas cover more than 190,000 hectares, or 17% of the plan area.

Plan implementation is the task of provincial agencies, resource developers and area users, as appropriate. Monitoring will make sure the plan keeps on track and achieves its goals.

The plan is a living document. Guided by its basic aims, the plan will be adapted over time to include new local knowledge, advances in scientific information, and emerging provincial policies. Public input will be sought on major amendments.

Most bands of the Nlaka'pamux, St'at'imc, Secwepemc and Tsilhqot'in First Nations declined to participate in plan development and have not endorsed the draft plan. Discussions to identify and address their interests continue. The Lillooet LRMP will not limit treaty negotiations or settlements.

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1 Introduction

Purpose and Scope

The *Lillooet Land and Resource Management Plan* (Lillooet LRMP) is a sub-regional land-use plan covering more than one million hectares in the south-western interior.

The plan provides strategic direction for the management and use of all provincially administered lands and resources. Its purpose is to promote economic development, foster stable communities and protect major ecosystems in the Lillooet area.

The plan was prepared by the Ministry of Sustainable Resource Management. It will be in effect for ten years after Cabinet approval, at which time it will be reviewed.

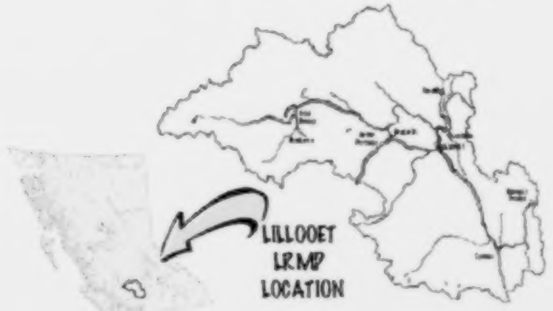
The plan applies only to land and resources administered by the Crown in right of the province. It does not apply to federally administered lands and resources, Indian reserves, private land, or areas managed by municipal or regional governments.

The plan will not limit treaty negotiations or settlements.

Plan Development: Participants and Process

Cabinet initiated the Lillooet LRMP in November 1995 as a consensus-based sub-regional planning process consistent with the *Provincial Land Use Charter* (1992) and *Land and Resource Management Planning: A Statement of Principles and Process* (1993).

A year earlier, in 1994, the Lillooet and District Community Resources Board (CRB) had formed to provide a focus for local participation and leadership in the land use planning process. The CRB embraced and articulated a broad range of community perspectives and was a partner with the province in steering plan development until 2001.



Between June 1996 and March 2001 the plan was developed by a round-table style of public committee (the LRMP "Table"). The CRB formed the core of the LRMP Table which also included representatives of local businesses, provincial conservation, recreation and mining interests, and local governments. The District of Lillooet was represented by its mayor and the Squamish-Lillooet Regional District was represented by its directors, while the Thompson-Nicola Regional District monitored the process and provided comments. Local governments, including the Village of Lytton (through its mayor), also had opportunity to provide input on the planning process through a Process Advisory Committee. Staff from provincial and federal regulatory agencies supported the Table with technical information, analysis and policy advice.

First Nations were encouraged to participate throughout the planning process. The Siska Indian Band maintained consistent representation at LRMP Table meetings. Both Siska and the N'Quatqua First Nation (Anderson Lake Indian Band) provided written comments on planning products. Several other bands and tribal councils observed Table meetings or participated in presentations.

In October 2000, government gave the Table a March 2001 deadline to complete the plan. Since a full land use plan was not attainable, the Table adopted a phased approach. Phase 1 was to include recommendations on major land and resource management issues, including protected areas. Phase 2 was to refine management direction and develop strategies for plan implementation.

Unable to reach consensus on a single land use scenario, the Table adopted a "final offer selection" approach to their Phase 1 recommendations. In March, 2001, two groups (the Lillooet Communities Coalition and the Conservation, Recreation, Tourism and Community group) submitted separate recommendations to government, with the understanding that all Table members would support whichever option was accepted in its entirety.

In April 2001, government announced its approval in principle of recommendations from the Conservation, Recreation, Tourism and Community group. Following the May 2001 election government reviewed the Phase 1 decision and concluded it was not a sound basis for completing the plan. In November 2001, government directed the Ministry of Sustainable Resource Management (MSRM) to complete the LRMP. Two discussion drafts were prepared by MSRM, drawing on the extensive work of the LRMP Table, as well as input from First Nations, the public and government agencies. Written comments were received from Lil'wat Nation (Mount Currie Band), the Nicola Tribal Association, and N'Quatqua First Nation (Anderson Lake Band). Public consultation ended in March 2002.

Rapid changes in land-use planning policy meant adapting the discussion drafts to new, results-based regulations and rebalancing economic, social and environmental themes. Descriptive and prescriptive material was also reduced. Management direction was evaluated through socio-economic and environmental assessments on an ongoing basis prior to Cabinet's approval to release this version of the plan.

This document is intended for use during consultations with First Nations. Initial consultations will be limited to legal land use designations and zones as recommended by the Lillooet LRMP. Other components of the plan may be incorporated into the formal consultation mandate later on. To date, agreements to review the plan have been reached with Esketemc and Lil'wat Nation. A broader, government-to-government protocol has been signed with the St'at'imc Chiefs Council (see Appendix). Once discussions have concluded, a plan based on them will be prepared for Cabinet review and approval.

Area Description

Geography

Most of the Lillooet area is in the central and eastern Coast Mountains, but it extends to the Chilcotin Plateau in the north and the Thompson-Okanagan Plateau in the east.

Topography is rugged: relief exceeds 2,800 metres; about one-third of the area is above tree line. Its highest point is Skihist Mountain (2,944 metres) while its lowest is the Fraser River south of Lytton (~140 metres). Better known ranges include the Bendor; Camelsfoot; Cantilever; Cayoosh; Chilcotin; Clear; Dickson; Leckie; Scarped; and Shulaps.

Major rivers include the Fraser, Thompson and Bridge. The Bridge River features a series of hydro-electric dams and reservoirs. Other important streams are the Yalakom, Tyaughton, Stein, Seton and Cayoosh. The area's four largest lakes - Anderson, Seton, Downton and Carpenter - also serve as hydro-electric reservoirs.

Lillooet is noted for its great natural diversity. More than 250 million years of plate tectonic processes have created a mosaic of oceanic and continental crust, with zones rich in minerals. During the last million years ice sheets and glaciers carved the present landscapes.

Three major air masses now converge in the area: wet coastal air from the west, cold plateau air from the north, and dry interior air from the east. Annual precipitation varies from 2,000 mm in the west to 300 mm in the east. Much of the area is semi-arid, in the Coast Mountains' rain shadow.

Vegetation changes from lower elevation grasslands through climax forests of pine, spruce and fir to alpine wildflowers and tundra. Six biogeoclimatic zones and 46 variants have been mapped; three times the average for interior areas of comparable size.

Although many species of fish and wildlife abound, some are vulnerable, threatened or endangered.

Administration and Population

The plan encompasses 1,125,025 hectares. Its boundary coincides with the Lillooet Timber Supply Area within the Cascades Forest District.

About 96% of the area (~1.1 million hectares) is administered by the Province. The remaining 4% (~48,000 hectares) is about equally divided between Indian reserves and private land.

Indian reserves are administered by the Federal government. First Nations are governed through a number of tribal and band organizations.

Private land is regulated by local governments, which include Squamish-Lillooet Regional District, Thompson-Nicola Regional District, the District Municipality of Lillooet and the Village of Lytton.

Population is sparse (about 6,500) but racially and culturally diverse. First Nations comprise about half the population and represent four broad cultural groups (Nlaka'pamux, St'at'imc, Secwepemc, and Tsilhqot'in).

Twelve bands have communities or reserves within the area while sixteen others use the area for traditional activities.

Since the 1850s, settlers of mainly European and Asian descent have made the area their home. The main population centres are Lillooet, Seton Portage-Shalalth, Fountain, Lytton and Pavilion. Smaller centres include Bralorne, Gold Bridge and Spences Bridge.

Over one-third of the population, and many seasonal residents, live in more rural areas such as Moha, Yalakom Valley, Anderson Lake, Gun Lake, Marshall Lake, Tyaughton Lake, Pavilion Lake, and Texas Creek.

Economy and Infrastructure

Communities have long based their economy on natural resources, but there have been many ups and downs.

Boom times have come from the early gold rushes, railroad construction, mineral exploration and mining, hydro dam construction, highway projects, forestry, fishing, tourism, farming and ranching.

Downturns have resulted in unemployment, wage disparities, rapid shifts in population, and lost opportunities for associated businesses. Despite these challenges, people are attracted to the area by its beauty and quality of rural life.

The area is linked to the rest of BC by two highways and three rail lines but lacks scheduled air service.

Most of the power that is generated locally supplies markets in the lower mainland.

Forestry continues to be the largest industry, supporting 19% of plan area employment. Other contributors include tourism at 15%, agriculture at 12%, and mining at 2%. The public sector provides 38% of plan area employment[1].

Lillooet and Lytton are the primary trade and service centres in the area.

A key challenge for Lillooet's communities, and a fundamental goal of this plan, is to diversify the local economy and ensure its sustainability.

Recent steps toward meeting this challenge include: the *Memorandum of Understanding* between the BC and Yukon Chamber of Mines, the Mining Association of BC and the Council of Tourism; the *Protocol Agreement* with the St'at'imc Chiefs Council; the *Memorandum of Agreement* between the Lillooet Timber Supply Area Community and Forest Economic Interests; and the *Memorandum of Understanding* regarding the management of Spotted Owl in the Lillooet Timber Supply Area (see Appendix).

How This Plan Provides Resource Management Direction

This plan has seven parts. Part 1 is the Introduction. Parts 2, 3 and 4 provide direction to sustain the economy, communities and the environment on multiple-use lands as well as protected areas. Part 5 describes plan monitoring, implementation and amendment. Part 6 explains terms used in the plan. Part 7 (Appendices) includes documents that supplement plan direction.

Parts 2, 3, and 4 are divided into sections, based on the resource or land use to be managed. Each section has the same general structure. Each has an introduction, a list of issues, and a goal statement, followed by a table with objectives, strategies, measures of success, and intent. Sections have maps, figures or tables to supplement them.

The **introduction** describes the resource or land use in its local context. **Issues** are problems or concerns that were identified during plan development. The **goal statement** describes the long-term vision or desired future condition for the land use or the resource.

Objectives provide management direction to address the issues and fulfil the goals. **Management Direction/Strategies** provide recommended means to achieve the objectives. Objectives are end results that will achieve the broader goals. Strategies are recommended means to achieve the objective. Additional information needed to explain the purpose of an objective or strategy, or to provide context, is in a column labelled "**Management Intent**".

Measures of Success/Targets describe specific results the plan seeks to achieve. The measures are based on the best information available at the time of writing. As knowledge improves they may need to change.

Maps show where features of interest occur or where management objectives apply. The maps reflect the best available information but ongoing research will continue to improve them. Also, the maps in this plan are not at a scale useful for operational planning or decision making. Users will need to acquire maps at the appropriate scale and currency for the work they intend to do.

Regulatory Context

General

The *Lillooet Land and Resource Management Plan* is part of BC's Land Use Strategy. The plan provides government policy direction on land use and resource management within the plan area for the next ten years (until 2014), at which time it will be reviewed.

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[1] Ministry of Management Services estimates based on the 2001 Census.

All land use and resource management activities in the plan area are subject to laws and regulations for Crown land and resource management. Provincial and federal statutes, and regulations made under statutes, take legal precedence over provisions of the plan.

The plan draws on, and complements, a large number of policies, guidelines, protocol agreements and interagency memoranda of understanding that exist to implement land and resource management in the province.

The plan is intended to help regulatory agencies manage the land and its resources in an integrated and balanced manner. It provides guidance for statutory decision-makers to consider during operational decision-making. It will be used for the development of legal objectives, consistent with legislation (e.g., *Forest and Range Practices Act*; *Land Amendment Act*).

The plan also provides strategic direction to future planning processes such as access management plans and sustainable resource management plans that may commence during implementation.

First Nations

Aboriginal rights and title exist in BC and receive protection under Section 35(1) of the *Constitution Act* (1982). The *Lillooet Land and Resource Management Plan* will not limit treaty negotiations and settlements.

Participating in plan development and implementation creates opportunities for First Nations to share information with the Province about their interests in the area.

Most bands of the St'at'imc, Nlaka'pamux, Secwepemc and Tsilhqot'in First Nations declined to participate in development of the plan. Although they have not endorsed it, discussions continue.

The Province encourages First Nations to identify their interests and will continue to work with First Nations to address their interests during implementation. To further this goal, the *Protocol Agreement* with the St'at'imc Chiefs Council has been developed (see Appendix).

The Province works co-operatively with First Nations on land management and regards this as a form of consultation through which the Province can seek to accommodate First Nation interests.

The Province also remains committed to meeting any obligations it may have to consult with First Nations on specific proposals for land and resource development.

Forest Practices

Under forestry legislation (e.g., *Forest Practices Code of BC Act*; *Forest and Range Practices Act*), some components of this plan may become legally enforceable. These components will be identified following plan approval.

Mining

The *Lillooet Land and Resource Management Plan* conforms to the Province's two-zone land use system for mineral resource management. Consistent with Section 14 of the *Mineral Tenure Act*, the objectives and measures of success in this plan are not intended to unduly delay, restrict or prohibit responsible mining exploration or development activities.

The Role of Information

This strategic plan is based on the best information available at the time of writing. Some of it, however, is limited or incomplete.

Continued efforts are needed to improve the quality of information for key economic, social and environmental values.

Successful implementation of a strategic plan depends on blending its management direction with the best local information that is available.

Individuals or organizations with local land use or resource information are encouraged to make it available in a timely and usable manner. It can then be incorporated into future planning, decision-making, and resource development.

Over time, scientific information may indicate that management goals, objectives, or measures of success will need to change. When this occurs, proposed changes will be reviewed in light of the plan's basic purpose. Where appropriate, the plan will be amended (see Part 5).

2 Economic Sections

2.1 *Timber and Silviculture*

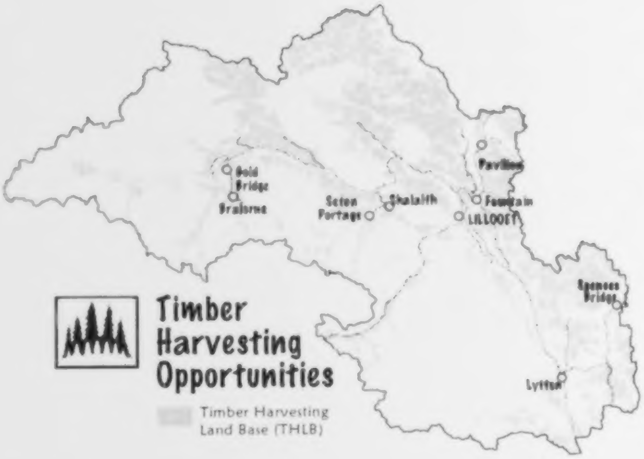
Forestry is the main economic sector, providing about one quarter of local employment.

Less than half the plan area is forested and only 26% (~296,000 hectares) is suitable and economical for timber harvesting (see map).

Within the timber harvesting land base, transportation distances, terrain and growing conditions create a wide range of timber values; less than 20% is considered to be high value.

Issues:

- Limited understanding of First Nations land uses and practices have led to conflicts over forest practices and harvesting deferrals.
- Mountainous terrain, high harvesting costs, limited infrastructure and restricted access have made local industry vulnerable to poor market conditions and limited their ability to harvest the allowable annual cut.
- Forest licensees often bear the costs of planning for non-timber resources.
- Visual quality objectives and "green-up" periods can conflict with timber supply needs.
- Forest fires and forest health agents that occur outside the timber harvesting land base and are not controlled can affect the quality, quantity and long term availability of timber within it.
- There is unrealized potential to improve the quantity and quality of future forests through better silvicultural practices and resource information.



Goals:

- Achieve harvest of the allowable annual cut.
- Achieve a sustainable supply of economically viable timber.
- Maintain environmental standards while minimizing costs and addressing other resource values.
- Foster and support an economically vibrant and ecologically sustainable forest sector.

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Identify an economically	1.1 Forest licensees, working with the Ministry of Forests and the Ministry of	Timber and Economic Recovery	

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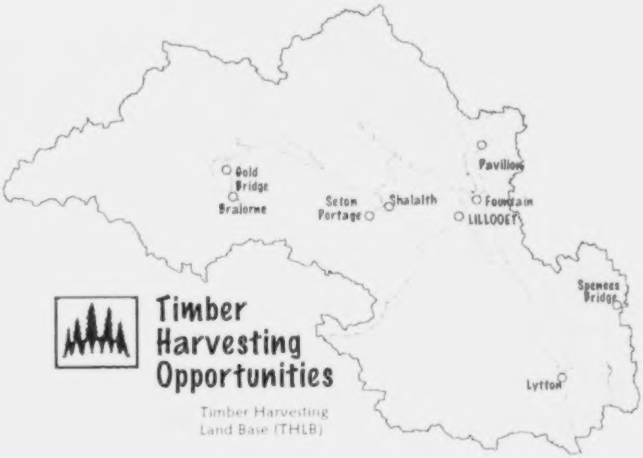

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1. Identify an economically	1.1 Forest licensees, working with the Ministry of Forests and the Ministry of	Timber and Economic Recovery	

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
viable and operationally feasible timber supply in the plan area for the next 20 years	Sustainable Resource Management, complete a short term timber availability assessment that includes: (i) An identification of the approximate timber sources over the next 20 years, and (ii) An identification of key resource management issues, and recommendations for resolution of these issues affecting this timber supply	Plan analyses completed (in 2004) and considered in government priority setting	
	1.2 Encourage the forest industry to work cooperatively with government agencies and other participants to resolve resource management issues	Timber and Economic Recovery Plan analyses completed (in 2004) and considered in government priority setting	
	1.3 The forest industry, working with appropriate federal and provincial agencies, will work cooperatively with First Nations to attempt to resolve constraints on the timber supply for the next 20 years. This may include considering First Nations land uses, practices and values and allowing for incorporation of available, relevant First Nations data in planning processes	Number of years of identified economically viable timber supply 100% of allowable annual cut achieved	
2. Achieve reductions in harvesting costs through the development of alternative harvesting prescriptions that are consistent with LRMP direction.	2.1 Seek opportunities for cost reduction through results based and performance based management, and professional accountability. Coordinate with new policy initiatives for results based forest management		
	2.2 Encourage forest licensees to complete an economic timber opportunity study to refine the current operability mapping.	Mapping completed	
3. Apply THLB planning allowances (see Table 1) to achieve the greatest benefits	3.1 MSRM, in consultation with MOF and WLAP, to develop a process for tracking THLB planning allowances	Process for tracking THLB planning allowances to be developed prior to plan implementation	

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
for specified wildlife species and provide a high degree of timber supply certainty			
4. Encourage innovative silvicultural and harvesting regimes to achieve management objectives for non-timber resources	4.1 Encourage timber harvesting where it would benefit wildlife (refer to details in Wildlife, Species at Risk, and Forest Biodiversity and Grassland Ecosystems)		The entire THLB will not require innovative silvicultural or harvesting systems to achieve management objectives for non-timber resources. A significant proportion of the plan area is currently managed using innovative practices. These practices might include: • adjusted cutblock size or shape to retain visual quality; • modified clearcut systems, such as small patch clearcuts, feathered edges, green tree retention or deciduous tree retention; • harvest and leave patterns; • alternative harvesting systems, such as highlead, helicopter, small machinery or horse-logging; and

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
			• alternative silvicultural systems, such as selection or shelterwood
	4.2 Where management for non-timber resources has the potential to make harvesting THLB uneconomical, consider innovative regimes to resolve the conflicts	Innovative silvicultural and harvesting regimes used to achieve management objectives for non-timber resources	
5. Ensure access to the THLB within the plan area consistent with LRMP direction	5.1 Encourage coordination of road planning and utilization among forest licensees	Percentage of the timber harvesting land base accessible for development	To reduce the amount of mainline road construction required by forest development licensees
	5.2 Encourage forest licensees to explore opportunities to coordinate funding and share costs amongst all users (i.e. partnerships between forest licensees and public recreation groups) for existing and future road networks and activities (construction, maintenance, deactivation, etc.)		Public use, and other commercial use, follows forestry development. Those users who directly benefit from the development of new roads should share in the funding
	5.3 Encourage total resource planning for forest road development		
	5.4 Encourage licensees to consider longer planning horizons when assessing appropriate road deactivation levels and activities		
6. Enhance timber production through silviculture and management practices to increase stand yields and value	6.1 Rapidly regenerate previously forested sites within the THLB using diverse, ecologically appropriate and commercially viable timber species	Improved timber yields and value	
	6.2 Encourage commercial thinning, fertilization, and pruning where economic benefits can be expected		
	6.3 Where appropriate, encourage the rehabilitation of sites where fibre productivity could be enhanced		
7. Improve local	7.1 Conduct a local study on site	Local studies on	

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
information on timber productivity from managed forests	index to determine the actual site productivity of managed forests	timber productivity in managed forests	
8. Foster improved communications between timber tenure holders, First Nations and other resource users	8.1 Develop and implement a system to track archaeological site information in a way that respects First Nations concerns regarding the protection of this information, and that supports improved planning for timber harvesting	Improved communications between timber tenure holders, First Nations and other users	
	8.2 Encourage licensees to maintain contact with, and offer feedback to, those who submit comments on forest plans	Improved communications between timber tenure holders, First Nations and other users	
	8.3 Review issues and recommendations relating to livestock / water / riparian area management		
9. Minimize losses in timber resources from forest pests, diseases and fire	9.1 Monitor the forested landbase, including protected areas, for forest pests, diseases and fire	Reduced timber volume losses due to fire, pests, disease	
10. Minimize impacts of resource management activities on botanical forest products	10.1 Review the impacts of resource management activities on the use and collection of botanical forest products		

Table 1: Timber Harvesting Land Base Planning Allowances

Resource	**Maximum hectares**	**Percentage of timber harvesting land base**
Mule deer winter range	6,000 ha	2.0%
Grizzly bear	8,000 ha	2.7%
Spotted owl	5,000 ha	1.7%
Total	**19,000 ha**	**6.4%**

Table 1 Notes

- Planning allowances have been created to increase environmental protection, decrease costs and provide certainty. The allowances are maximum amounts and not targets. They apply to commercial forestry operations and woodlots. They are not intended to affect incidental harvesting required for non-forestry uses (e.g., energy, mineral or tourism development; roads or other infrastructure).

- Planning allowances are in addition to various reductions to the productive forest land base that are identified in the Chief Forester's *Lillooet Timber Supply Area Rationale for Allowable Annual Cut Determination Effective January 1, 2002*.
- The allowance for grizzly bears will be applied first to the Stein/Nahatlatch grizzly bear population unit and then the South Chilcotin grizzly bear population unit.
- The allowance for spotted owls is for interim management until a plan for the management or recovery of owls in the Lillooet area is in place. Changes to this allowance will be evaluated once the plan for owls is prepared.
- Planning allowances are to be applied to the resource values specified in Table 1. They are not to be "traded" between values. Efforts will be made during implementation of the Lillooet LRMP to overlap these allowances with other values in order to reduce impacts to the timber harvesting land base.
- A procedure for tracking the allocation of allowances will be developed by the Ministry of Sustainable Resource Management, ideally before plan implementation, in co-operation with the Ministry of Water, Land and Air Protection, the Ministry of Forests and stakeholders.

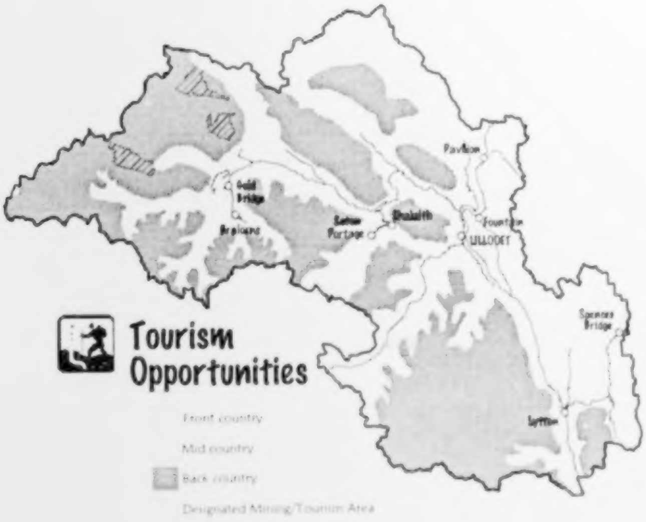
2.2 *Tourism and Recreation*

The plan area has high recreation values due to its landforms, climatic diversity, relatively undeveloped state, and proximity to the lower mainland. The area is also part of the popular circle tour from Vancouver via Duffey Lake and the Fraser Canyon.

Major summertime activities include rafting, fishing, hiking, horseback riding, mountain biking and off-road touring. Ski touring and snowmobiling are popular winter activities.

Tourism (commercial recreation) offers a wide variety of services and has potential for diversification and development.

Three tourism/mining areas will be designated in the Southern Chilcotin Range (see map) to ensure sustainable management of these industries in key locations. A management plan, guided by the intent of the 2004 Mining/Tourism *Memorandum of Understanding*, will be prepared for these areas. To optimize resource development, these areas will be closed to industrial logging.



commercial forestry operations and woodlots. They are not intended to affect incidental harvesting required for non-forestry uses (e.g., energy, mineral or tourism development; roads or other infrastructure).

- Planning allowances are in addition to various reductions to the productive forest land base that are identified in the Chief Forester's *Lillooet Timber Supply Area Rationale for Allowable Annual Cut Determination Effective January 1, 2002.*
- The allowance for grizzly bears will be applied first to the Stein/Nahatlatch grizzly bear population unit and then the South Chilcotin grizzly bear population unit.
- The allowance for spotted owls is for interim management until a plan for the management or recovery of owls in the Lillooet area is in place. Changes to this allowance will be evaluated once the plan for owls is prepared.
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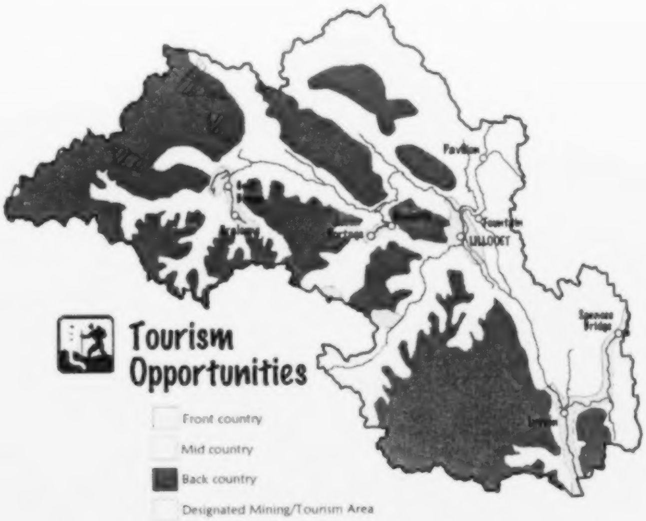


Issues:

- Lack of inventories and opportunity studies on recreation and tourism features (e.g., lakes, trails) can limit their recognition and management.
- Industrial development and road construction can change the recreation and tourism opportunities available.
- Competition between public and commercial uses of the same areas can lead to degradation and a loss of economic and social benefits.
- Decreased health and sustainability of fish and wildlife populations can reduce the viability of recreation resources and tourism businesses.
- Recreation and tourism activities can have adverse impacts on fish, wildlife, and terrain (especially in popular areas). The social and physical carrying capacities of recreational sites and areas become a concern as the numbers of users and types of use increase.

Goals:

- A wide range of high quality, well-managed recreation/tourism experiences available for residents and visitors.
- Secure commercial tenures.
- Minimal conflicts with other resource based interests.
- Recreation and tourism development that considers carrying capacities, local interests and job creation.
- Foster and support a high quality, well managed and ecologically sustainable recreation and tourism sector.

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Manage recreation and tourism use within physical and social carrying capacities	1.1 Consult with First Nations during recreation-related inventories to improve information on traditional use and avoid potential conflicts with new activities		
	1.2 Increase the physical capacity of the site/area by expanding or hardening facilities in a way that prevents site degradation but conserves a natural appearance		
	1.3 Replicate the experience by developing another comparable site/area		
	1.4 Ration use by permit only when necessary to meet management plan and recreational quality or ecological integrity objectives		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
2. Balance tourism and recreation interests with other resource users	2.1 Encourage the agencies involved in tenure administration, or appropriate statutory decision makers, in cooperation with the resource based tourism industry and recreational interests, to consider setting physical and social carrying capacities (and limits to acceptable change) on a priority basis in areas where user density issues are identified		This should respect First Nations values on the landscape and be coordinated through the development of a Recreation Management Strategy
	2.2 Encourage partnerships between government, First Nations and other sectors, including the tourism industry that will facilitate the resolution of potential resource user conflicts		
	2.3 Encourage tourism operators to work with First Nations and other groups to avoid potential access-related conflicts		
	2.4 Manage for high-quality visual landscapes along main recreation corridors and at significant features (see Visual Management section)		
	2.5 Identify existing recreational use near settlements ("near" is to be defined by the process itself and dependent on the type of recreational use being examined)		
3. Subject to the availability of government resources, provide facilities and services to support a wide range of recreation and tourism opportunities;	3.1 When considering applications under the *Land Act* and *Forest Act*, recognize the value of maintaining existing and potential public recreational access points to lakes and rivers in order to maintain options for long term expansion of water-based recreation, except where this adversely affects Species At Risk habitats		The provision of facilities, services and overall management of recreation is subject to government resources (staff and funding) Prior to designations, inter-agency referrals will be used where appropriate to identify any
	3.2 Encourage partnerships (between government, First Nations and recreation user groups) wherever possible in order to deliver recreation objectives		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	3.3 The management of recreational lakes, trails and other features noted in Table 1 below should be considered in addition to existing sites and trails		potential resource tenure and use conflicts The maintenance of existing sites & trails may take precedence over additional infrastructure.)
	3.4 To retain recreational quality and experiences, apply appropriate designations (e.g., *Land Act* Reserve) and manage recreational use on public access points to lakes and rivers		
4. Maintain or enhance identified backcountry areas to support a broad range of recreation and tourism opportunities	4.1 Coordinate access-related recreation planning through the development of a Recreation Management Strategy		This objective is not intended to restrict the issuance of cutting permits. The intent is to maintain the broad range of recreational opportunities and experiences across the plan area
5. Undertake area-focused tourism/recreation planning to balance the interests of commercial tourism, public recreation groups and other stakeholders	5.1 Encourage coordination among agencies to foster tourism business opportunities within the plan area		
	5.2 Involve First Nations in community economic development planning to identify opportunities and avoid potential conflicts (legal or otherwise) between users		
	5.3 Consult with First Nations for information on spiritual values and relative significance to First Nations culture		
	5.4 Public recreation groups, commercial tourism interests and other stakeholders should make efforts to work cooperatively in order to find mutually agreeable approaches to recreation use and management of activities		
	5.5 First Nations should be involved in planning public recreational		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	use/activities and the identification of related potential economic development opportunities		
6. Develop and implement a management plan for designated mining/tourism areas (see Tourism Opportunities map)		Management plan for mining/tourism areas completed by 2005	Management plan should be guided by the intent of the Mining / Tourism *Memorandum of Understanding* Encourage tourism development in mining/tourism areas
7. Maintain the aesthetic integrity of known physical features and key areas of special value to tourism operators	7.1 Tourism operators will identify features and areas significant to their business in operating plans submitted to tenuring agencies		The Ministry of Sustainable Resource Management, in co-operation with First Nations, Land and Water BC, Ministry of Forests, and other relevant agencies will be the keeper of information on special features
	7.2 First Nations should identify special features and areas during resource planning and consultation so that these are recognized when new tourism developments are being considered by tenuring agencies		
	7.3 Information collected will be provided to appropriate resource management agencies and industrial operators		

Table 1

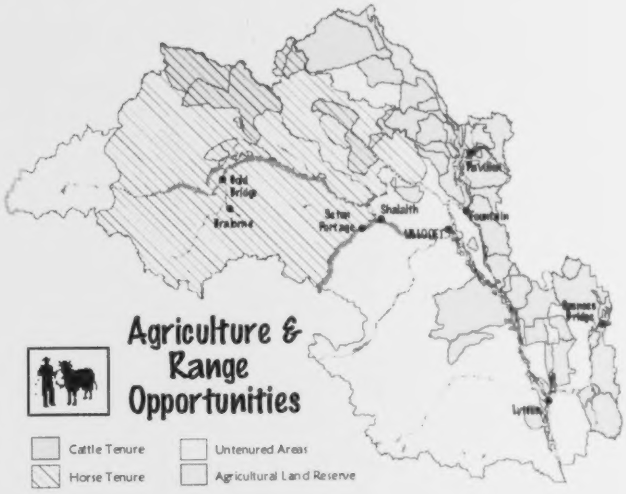
Underlined sites are priorities for formal *Land Act* reserves for long term public recreational use. These are identified for consideration by the appropriate agency using referrals to any agencies that may be affected by these designations.

Bighorn site, Thompson River access	Blowdown Lake, access point to Stein Park
Burkholder Lake, walk-in fishing	Devil's Lake (Siwhe Creek), walk-in alpine lake; Stein Park access
Drynoch Slide addition to Goldpan Park, Thompson River access	Grease Hole (Spences Bridge), Thompson River access
Midway Lake (Shulaps)	Molybdenite Lake (Texas Creek), isolated sub-alpine lake
Peridotite Lake (Shulaps), walk-in, Sub-alpine lake	Retaskit Lake (Shulaps)

Serpentine Lake (Shulaps)	Spences Bridge Wye (opposite Nicola River mouth), access
Thompson River Islands	Upper Fountain Lakes, sub-alpine
Fraser River	
Trails initially identified for consideration are:	
Blue Creek trail	Brett Creek trail
Cariboo Wagon Road trail	Cerise Creek trail
McGillivray Pass trail	Siwhe Creek trails
Skihist trails (in Park addition)	Taylor and Cinnabar Basin trails
Serpentine Ridge trail	Old Sheep trail (connecting 9 Mile Ridge & French Bar)
Features initially identified for consideration are:	
Lost Valley waterfall	Antoine Creek fossil site (if outside PA)
Lytton fossil sites (2)	Pavilion fossil site (if outside PA)
Shaw Springs (Drynoch, Thompson River) rock hounding site	Siwhe Creek fossil site
Skihist rock hounding site (outside park and addition, location unspecified)	Yalakom River fossil site

2.3 *Agriculture and Range*

Farms and rangelands help sustain the local and regional economy. About 3% of the area (~31,500 hectares) is in the Agricultural Land Reserve (ALR), with equal amounts on Crown and private land. The ALR includes land designated by the Province for agricultural purposes.


Gold Bridge
Bralorne
Seton Portage
Shalalth
LILLOOET
Pavilion
Fountain
Spences Bridge
Lytton
Agriculture & Range Opportunities
Cattle Tenure
Horse Tenure
Untenured Areas
Agricultural Land Reserve

Agricultural land uses include forage production and ranching, as well as fallow deer, vegetable production, ginseng, agri-tourism and tree fruit production. Alternate crops, herbs and grape production provide further opportunities for diversification.

Rangelands are primarily Crown land areas that provide suitable forage for domestic livestock and wildlife.

Almost all available rangeland is under tenure although opportunities exist for range enhancement. Cattle grazing occurs primarily along

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Agriculture &
Range
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Almost all available rangeland is under tenure although opportunities exist for range enhancement. Cattle grazing occurs primarily along the Yalakom, Bridge, Thompson and Fraser River systems. Horse grazing for commercial guide outfitting and packing ventures occurs mainly in the northwest (see map).

2.3.1 Agriculture

Issues:

- Agricultural expansion is limited by the availability of affordable arable Crown land, irrigation water and range lands.
- Current ranching and agri-tourism operations require access to productive Crown range to remain viable.
- Increasing competition for and conflict over Crown resources from other types of use and development.
- Loss to livestock due to predator/livestock interactions.

Goals:

- A sustainable and economically viable agriculture industry with access to water, land and range resources for expansion
- A diversified mix of agricultural product marketed provincially, nationally and internationally

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Enhance access to Crown Land to support the expansion and diversification of a sustainable agriculture industry	1.1 Alienation of Crown land for agriculture use must be done in an integrated manner with meaningful consideration of other values	Crown land available for agricultural use High value agricultural Crown land within the ALR Initiation of a viticulture capability study by 2006 Diversity of organic products	Expansion and diversification could include vegetable production, ginseng, herbs, grape and tree fruit production, fallow deer ranching, agri-tourism. Continue to allow Crown lands with suitable agricultural potential, to be alienated for agricultural use.
	1.2 Encourage industry diversification/integration opportunities where applicable (e.g., Agri-Tourism, Woodlot Program)		
	1.3 Applications for Crown land alienation that may result from a process that identifies potential expansion areas should be labelled as "identified opportunities."		
	1.4 Encourage First Nations' pursuit of expanded and diversified agriculture opportunities		
2. Maintain or enhance the productivity of agricultural lands by retaining existing water rights for irrigation and by identifying	2.1 Ensure that watershed developments and various water management planning processes recognize the need for consistent and sustainable flows of irrigation water for the agriculture sector	Increased productivity of agricultural lands New sources of irrigation water identified	
	2.2 Through comprehensive water availability studies and watershed		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
new sources of irrigation water	planning processes, determine the potential for new irrigation water supplies where expansion of the irrigated land base is possible on private and identified Crown lands having arable potential		
	2.3 Ensure that further water licensing meaningfully considers other aquatic resources, including fish and wildlife, as well as domestic, community and First Nations use		
3. Minimize livestock/predator interactions		Reduced livestock losses due to predators	
4, Minimize agricultural conflicts that may result from adjacent land uses such as community activities expansion, industrial activities, wildlife or recreational activities	4.1 Encourage implementation of the *Farm Practices Protection Act* legislation as needed		
	4.2 Form partnerships between the agriculture industry and fish and wildlife managers that will provide mutual benefits for parties involved (e.g., riparian management, habitat enhancement, etc.)		

2.3.2 Range

Issues:

- Improper range practices can degrade rangeland health and productivity, and negatively impact other resource values.
- The viability of industries dependent on range agreements relies on the maintenance of current range agreements and the ability to capitalize on new grazing opportunities.
- Noxious weed invasion decreases the health, productivity and biodiversity of rangelands.
- Lack of a comprehensive inventory describing the current condition of rangeland resources.

Goals:

- A productive and sustainable range resource, which supports natural ecosystem functions, viable plant and wildlife populations, and vibrant ranching and horse-based tourism industries.

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
1. Maintain or enhance sustainable livestock grazing on Crown range	1.1 Where appropriate, and restricted to transitory (non-permanent) range areas, increase forage through seeding suitable seedbeds post-harvest (cutblocks, roads and landings)	Sustainable level of grazing (e.g., animal unit months) authorized in range agreements	
	1.2 Maintain grazing in cutblocks while minimizing damage to tree seedlings		
	1.3 Encourage, through management, increased cattle use as harvested plantations age and their vulnerability lessens		
	1.4 Develop and implement a recreational horse use extension program aimed at educating equestrian recreationists about proper range management practices		
	1.5 Use signs, brochures, maps and other aids to inform equestrian recreationists about proper range management practices		
	1.6 Incorporate, where appropriate, available First Nations' knowledge of traditional food, medicinal and spiritual use of plants (e.g., bitter root) and plant communities into range use planning		
2. Manage livestock grazing to maintain healthy and vigorous rangeland plant communities		Healthy rangelands and properly functioning riparian areas (trend)	
3. Manage livestock to maintain and restore riparian	3.1 Rate riparian function following the Ministry of Forests' range riparian assessment checklists and procedures (as funding permits)	Water quality in community watersheds with livestock grazing	

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
areas in a properly functioning condition and, in community watersheds, to prevent declines in water quality	3.2 Develop a rehabilitation priority list for non-functioning riparian systems	% level of compliance with RUPs	
	3.3 Implement grazing practices to restore proper riparian function where grazing is shown to be the primary activity influencing the riparian plan community		
4. Prevent and control noxious weed invasion	4.1 Encourage implementation of the *Weed Control Act* as needed	Noxious weeds controlled	Preference is for no chemical means of control where effective/efficient
	4.2 Encourage control of noxious weeds on Crown, private and reserve lands		
	4.3 Distribute noxious weed information to the general public and encourage reporting and volunteer control efforts		
	4.4 Where practical, and effective use biological control instead of chemical control to avoid impacts to medicinal plant harvesting		
	4.5 Encourage proper harvesting of medicinally beneficial weeds (e.g. St. John's Wort, Canada thistle), where feasible, instead of the use of chemicals as a measure of control		
5. Subject to available resources, increase knowledge and information about the range resource	5.1 Determine which areas in the alpine can be used to establish both reference alpine benchmark areas and areas used to monitor changes in the alpine ecosystems when grazing is absent (wildlife and/or livestock)	Comprehensive range condition inventory available	To provide a catalogue of plant communities, range conditions and/or health, riparian function, range developments, forage use, forage production and other items as deemed necessary to provide baseline

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
			data for trend monitoring and management direction. Priority should be given to permanent range types Information will provide direction to Tourism, Recreation, and the ranching industry around new grazing and other opportunities

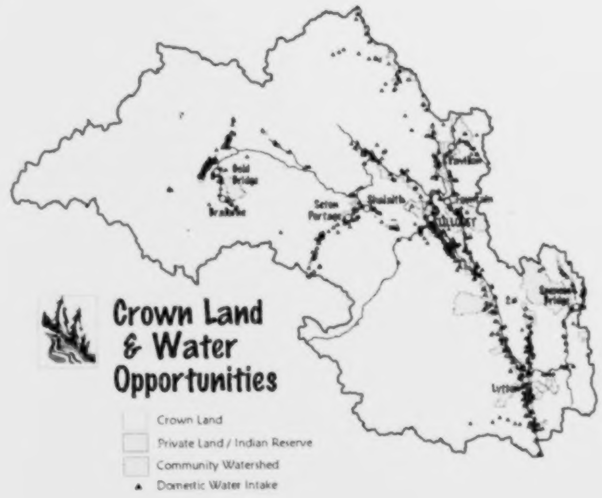
2.4 *Crown Land and Water*

Sustainable economic development and community expansion depends, to a large part, on the availability of Crown land and water. Water quality and availability can have a substantial impact on the growth of communities and their economies, and on ecosystems.

This section addresses Crown land uses administered under the *Land Act*, water use regulated under the *Water Act* and management of drinking water sources.

Public and private infrastructure (e.g., transportation corridors, communication sites, landfills) and tourism development are supported through *Land Act* tenures, leases and permits.

Surface water use is allocated and regulated through a water licensing system administered under the *Water Act*. Most drinking water comes from surface sources. The *Drinking Water Protection Act* addresses source protection.


Crown Land & Water Opportunities
Crown Land
Private Land / Indian Reserve
Community Watershed
▲ Domestic Water Intake
Gold Bridge
Bralorne
Seton Portage
Shalalth
Lytton

2.4.1 Crown Land

Issues:

- Better communication and understanding of Crown land management is needed.

- *Land Act* tenure and development access are critical for economic diversification and sustainable growth.
- Planning for development opportunities is important to ensure existing and potential uses do not block access to future land allocation opportunities and expansion.
- *Land Act* applications need to consider all values and land uses in the approval process to ensure highest and best use of the area.
- Economic diversification and development would be supported by streamlining application processes through improved accountability, better agency service to private clients, and timely decision-making.

Goals:

- Sustainable, economically and environmentally responsible Crown land development achieved through balanced decision-making

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Provide access to Crown land to support the development of community infrastructure, settlement and economic development in a manner that is consistent with the maintenance of other resource values	1.1 Integrate LRMP resource values and uses in decisions regarding the best use of Crown Land under the *Land Act*	Landbase available for development by a wide range of land uses	
	1.2 Use LRMP mapping and objectives to identify compatible and highly incompatible uses		
	1.3 *Land Act* tenured activities near the interface of Crown and private lands should be designed so that conflicts between existing recreational users and new *Land Act* tenure holders can be minimized	Conflicts minimized	
	1.4 Appropriate provisions to mitigate adverse impacts to resource values and uses should be included in Crown land decisions	Provisions applied as required	
	1.5 Where necessary, use *Land Act* designations to maintain resource values, e.g. reserves	Completed annually	
	1.6 Compatible uses should be combined (e.g., power lines and private drive access that cross Crown land) and incompatible uses should be separated (e.g., snowmobiles and heli-ski tenures) by directing specific uses to appropriate areas where possible. For example, Promote "twinning" or multiple use of access, utility, and other corridors in decisions for Crown	Access, utility and other linear developments share corridors	

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
	land dispositions in order to minimize impacts on other resources (e.g., productive forest landbase, sensitive visual landscapes, Agricultural Land Reserve and wildlife habitat)		
	1.7 Undertake inventories and identify opportunities for Crown land disposition including, but not limited to, First Nations uses and opportunities, commercial recreation, recreational cottage lots, linear corridors, community infrastructure and expansion, industrial uses, etc.		
2. Maintain the option for access to lands beyond the area described in *Land Act* tenures	2.1 Consider LRMP access objectives as *Land Act* tenures are reviewed or amended over time		Access information should be readily available to agencies for their consideration
	2.2 Use the access objectives and seasonal maps under Access Section when planning road access for new Crown land tenures		
3. Minimize access restrictions to existing *Land Act* tenures	3.1 Minimize the impact of *Forest Act* and *Wildlife Act* access restrictions to *Land Act* tenure holders	Landbase available for development by a wide range of land uses *Land Act* decisions maintain access to Crown land	This is to facilitate long term security for Crown land operators in the plan area. It is recognized that measures may be required to mitigate environmental impacts (e.g., uncontrolled erosion, wildlife disturbance) or reduce risks (e.g., unsafe bridges). There is no implication that any party will maintain any road on behalf of the tenure holder
	3.2 Utilize interagency agreements and memoranda of understanding (MOUs) to establish protocols for issuing vehicle permits to persons with *Land Act* tenures in areas with regulatory access restrictions (e.g., Red Mountain, French Mountain, China Head, Nine Mile Ridge, Hogback, Spruce Lake, Bonanza Creek)		
	3.3 Ensure that Crown land tenure holders have the opportunity to maintain access		

2.4.2 Water

Issues:

- Water shortages exist, and are likely to worsen, resulting in competition for limited water supplies.
- Water licensing decisions need to account for the water needs of fish, fish habitat and aquatic ecosystems.
- Water allocation planning, which includes information and analysis of seasonal water flows, licensed use, and ecological requirements, is needed.
- An inventory of available water (e.g., quantity and flow information) for agricultural and industrial development, domestic use, storage, conservation purposes, and fish, is needed.
- Development plans and decisions need to consider potential impacts to water quality and quantity.

Goals:

- Balanced water management that provides for:
  - safe, reliable and accessible drinking water,
  - industrial development; and
  - fish, fish habitat and aquatic ecosystems

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Improve information about water use and availability	1.1 Inventory water storage opportunities for domestic, agricultural and industrial development and instream flows	Water available for development, storage and water licensing opportunities.	
	1.2 Encourage domestic drinking water use licensees to use available internet-based mineral resource information to acquaint themselves of mineral exploration activities in their watersheds		
2. Improve information about water quality, quantity and timing of flow	2.1 Research management practices to increase water yields from dry ecosystems	Easily accessible (e.g., website) and accurate water licence, water monitoring, and watershed assessment data. Adequate monitoring of water quality and quantity	
	2.2 Continue existing baseline water quality monitoring		
3. Ensure adequate instream flow requirements for fish, fish habitat and aquatic ecosystems	3.1 Instream flow requirements established for fish and aquatic ecosystems		
4. Address	4.1 In watersheds where there are water	Water allocation	

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
existing and potential water use conflicts in all watersheds with shortages	shortages, conduct water allocation planning	plans exist for watersheds with existing or potential water use conflicts	
5. Manage resource development and use activities to maintain ground and surface drinking water sources, including water quality, quantity and timing of flow	5.1 Resource development plans address water quality, quantity and timing of flow	100 %	
	5.2 Special care to protect water quality in watersheds with domestic use		
6. Maintain hydrologic stability in all watersheds contributing to fish habitat and licensed domestic water use	6.1 Encourage licensees to prioritize watersheds requiring assessments	Hydrologic assessments completed for drainages where there is evidence of destabilization or potential destabilization	Use tools such as the Lillooet Forest District Watershed Screening Tool (August 2000)
	6.2 Incorporate First Nations traditional use and knowledge in these assessments where available		
	6.3 Encourage forest licensees to complete assessments on all prioritized watersheds		
7. Improve communication amongst water users, development proponents, and resource agencies to minimize conflicts about water use and resource development	7.1 Facilitate sharing of water monitoring and watershed assessment data broadly, including the general public and stakeholder organizations	Water tenures implemented without conflicts Resource development in watersheds with water tenures	Easily accessible (e.g., website) and accurate water licence, water monitoring, and watershed assessment data.

2.5 *Energy and Minerals*

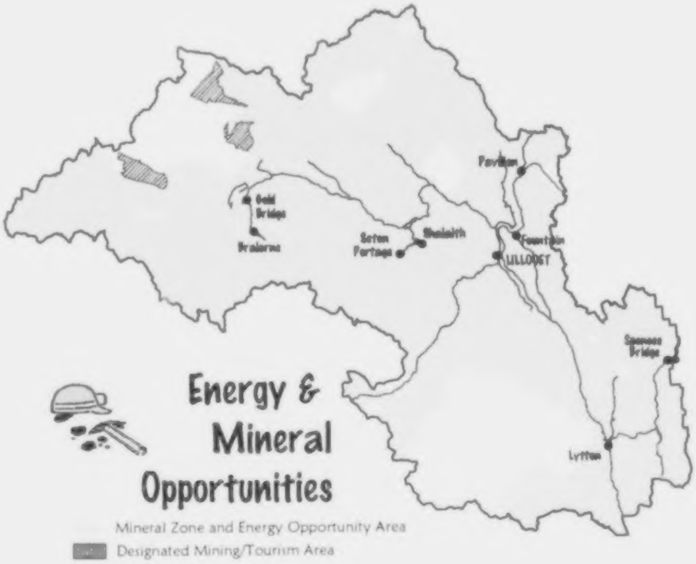
Hydro-electric facilities on the Bridge and Seton rivers are the third largest in the province. Expansion opportunities are limited. There is, however, good potential for smaller hydro-electric developments. Other energy resources such as solar, wind, co-generation, oil, gas, coalbed methane and geothermal are untested or untapped.

Lillooet has a long history of mining and some of the best mineral potential in the province. Future mines could produce metals (gold, silver, copper, tungsten), industrial minerals (limestone, dimension stone, talc), aggregates (sand, gravel, crushed rock) and gems (jade, agate).

Three mining/tourism areas will be designated in the Southern Chilcotin Range (see map) to ensure sustainable management of these industries in key locations. A management plan, guided by the intent of the 2004 Mining/Tourism Memorandum of Understanding, will be prepared for these areas. To optimize resource development, these areas will be closed to industrial logging.

Issues:

- Uncertainty of access for mineral and energy resource development.
- Land use planning processes focused on surface values fail to adequately account for mineral exploration and development opportunities.
- Land use designations and constraints favouring other resource values can reduce opportunity for, and increase the cost of, mining development and add to investor uncertainty.
- Shortage of designated placer areas.


Pavilion
Gold Bridge
Bralorne
Seton Portage
Shalalth
Fountain
LILLOOET
Spences Bridge
Lytton
Energy & Mineral Opportunities
Mineral Zone and Energy Opportunity Area
Designated Mining/Tourism Area

- Limited public understanding of exploration and development activities, project review processes, and ways of protecting the environment and resolving disputes.

Goals:

- Prosperous mineral and energy sectors with full access to Crown land for exploration and development.

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
Energy Objectives			
1. Provide access to Crown land outside protected areas for exploration and	1.1 Work toward a "single window" of approval for all exploration and development		

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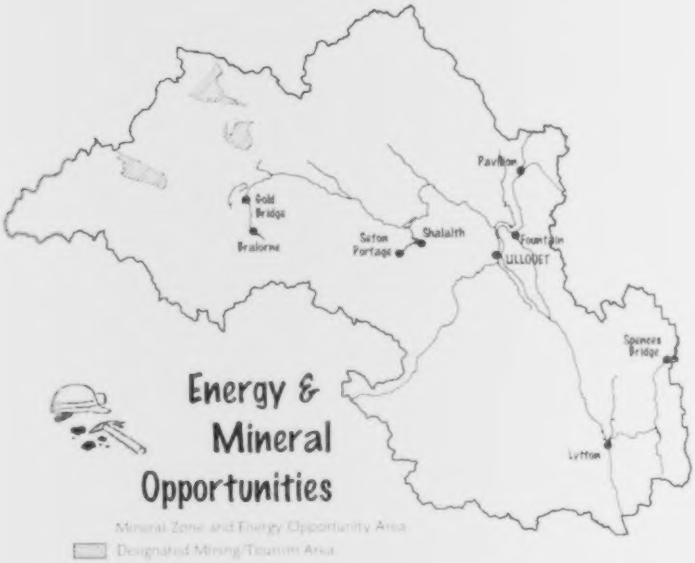
- Land use designations and constraints favouring other resource values can reduce opportunity for, and increase the cost of, mining development and add to investor uncertainty.
- Shortage of designated placer areas.
- Limited public understanding of exploration and development activities, project review processes, and ways of protecting the environment and resolving disputes.


Pavilion
Gold Bridge
Bralorne
Seton Portage
Shalalth
Fountain
LILLOOET
Spences Bridge
Lytton
Energy & Mineral Opportunities
Mineral Zone and Energy Opportunity Area
▨ Designated Mining/Tourism Area

Goals:

- Prosperous mineral and energy sectors with full access to Crown land for exploration and development.

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
Energy Objectives			
1. Provide access to Crown land outside protected areas for exploration and	1.1 Work toward a "single window" of approval for all exploration and development		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
development of energy resources			
2. Encourage development of regional energy resources to provide local employment and investment opportunities	2.1 Allow for future energy resource expansion to facilitate business decisions to locate in the plan area.	Access to 100% of the energy opportunity area for exploration and development Improved energy resource inventories Improved public awareness of energy resource development and management	
	2.2 Allow for the development of new or expanded infrastructure (e.g., pipelines; electric transmission lines)		
	2.3 Consider opportunities for small-scale hydro generation as a high priority use of available water when it can be shown that the potential negative consequences of such a development can be mitigated		
	2.4 Work cooperatively among agencies, First Nations and local government to support the development of co-generation facilities where they are economically feasible and environmentally sustainable		
	2.5 Consider opportunities for alternative energy generation, including wind and solar power, and support developments where they are economically feasible and environmentally sustainable		
	2.6 Encourage industry and government geological surveys and research on subsurface energy resources		
3. Allow for maintenance of existing energy infrastructure	3.1 Allow access to all existing pipeline and electric transmission line rights of way for regular maintenance and upgrades	Access allowed. Pipelines and transmission lines maintained and improved	
4. Reduce adverse impacts of energy development on fish and fish habitat, wildlife, visual	4.1 Ensure that energy developers have access to current fish and fish habitat mapping	Non-energy resources and uses considered and addressed in standard project review and approval	
	4.2 Use appropriate fish habitat		

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
resources, First Nations, tourism and recreation users, and local residents	guidelines and best management practices during infrastructure planning and development	processes	
	4.3 Ensure that approvals for the expansion or creation of new energy corridors consider environmental values (particularly fish and wildlife)		
	4.4 Ensure that energy project review and approval processes provide opportunities for input from First Nations, local government, the public, and other interested persons or groups		
	4.5 Encourage compatible uses of energy infrastructure (e.g., snowmobile trails on pipeline routes or transmission lines) to provide new tourism or recreation opportunities		
	4.6 New energy developments should use existing utility corridors and infrastructure as much as practicable to prevent further impacts to the landscape		
Mineral Objectives			
1. Foster and support an economically vibrant and environmentally responsible mineral sector		Increased exploration expenditures reflecting improved investor confidence. Improved mineral resource inventories	
2. Encourage exploration, development, production and processing of geological resources on all available mineral lands	2.1 Periodically review mineral lands to ensure that as much of the plan area as possible is available for mineral activities	Increased exploration expenditures reflecting improved investor confidence	
	2.2 Disseminate information on mineral land availability to investors, prospectors, the mineral industry and other interested parties		
	2.3 In materials developed to promote the province's mineral		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	resources, identify mineral development opportunities in the Lillooet area		
3. Ensure appropriate access for exploration, development, production and processing of geological resources throughout the plan area	3.1 Ensure that new road accesses required for exploration activities are built according to mining-specific legislation and regulation	Access to 100% of the mineral zone	To facilitate mechanized or motorized access in support of mineral activities It is recognized that regulatory agencies may set conditions on permits to address non-mining values. For example, Ministry of Water, Land and Air Protection may set conditions on the use of motorized vehicles in areas with *Wildlife Act* restrictions, in order to address the environmental values for which the restrictions were established It is also recognized that parts of some wildlife habitat areas (WHAs) may preclude access construction in order to conserve habitat or avoid mortality
	3.2 In areas with Section 58 *Forest and Range Practices Act* (FRPA) motor vehicle restrictions, continue to allow access for mineral exploration and development activities		
	3.3 Ensure that access for mineral exploration and development continues to be allowed in wildlife management areas (WMAs), wildlife habitat areas (WHAs), and areas subject to *Wildlife Act* motor vehicle restrictions		
	3.4 In areas with *Wildlife Act* motor vehicle restrictions (e.g., Red and French Mountains, China Head, Nine Mile Ridge, Hogback, Spruce Lake), encourage WLAP to promptly issue vehicle permits to persons conducting mineral exploration (e.g., mineral tenure holders, free miners and their agents or contractors)		
	3.5 As much as practicable, ensure that non-status roads now used to access mineral properties remain open for future exploration use		
	3.6 In order to conserve environmental values, incorporate into *Mines Act* permits appropriate measures to limit non-mining use of exploration access roads. Appropriate measures could include using		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	signs, blocking roads, installing gates, berms or ditches, and ensuring prompt reclamation or deactivation (as per Mineral Exploration Code)		
4. Integrate mineral and non-mineral resources and uses in planning and implementing mineral exploration, development and mining	4.1 Use standard project review and approval processes, including applicable legislation, regulations and policies, to address non-mining resource values and uses identified in this plan	Non-mineral resources and uses considered and addressed in standard project review and approval processes	
5. Maintain opportunities for placer mining in the plan area	5.1 Maintain existing placer claim area and placer lease area designations	Placer designations continued	Not intended to fetter ongoing Provincial policy development
	5.2 Continue the current review and approval process for establishing new placer claim and lease areas		
	5.3 Continue current placer regulations for existing and new placer claim and lease areas		
6. Improve public awareness of mineral resources, activities, and management	6.1 Disseminate information on mineral resources, exploration activities, project review and permitting processes, environmental protection measures, and dispute resolution mechanisms to First Nations, local governments, community organizations and the public	Improved public awareness of mineral and energy resource development and management	
	6.2 Encourage Ministry of Energy and Mines to disseminate information on current mineral exploration and development activities via the Internet		
	6.3 Encourage First Nations, local governments, community organizations and the public to use available Internet-based[2] mineral resource information to acquaint themselves with mineral		

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[2] Mineral resource and mineral tenure information is available on the Ministry of Energy and Mines website: www.gov.bc.ca/em.

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	resources and activities in areas of interest to them		
	6.4 Foster improved communication among mineral and non-mineral tenure holders, First Nations, resource users, and the public		
	6.5 Encourage holders of Crown land or resource tenures (e.g., water licences for domestic use; commercial recreation tenures; woodlot licensees) to use available internet-based mineral resource information to acquaint themselves with mineral activities in their tenure areas		
	6.6 Encourage surface and subsurface tenure holders to inform each other of activities that might adversely affect each other's business		
	6.7 Ensure that the various agencies responsible for managing tenures make address or contact information broadly available, in order to facilitate communication		
7. Develop and implement a management plan for designated mining/tourism areas (see map)		Management plan for mining/tourism areas completed by 2005	Management plan should be guided by the intent of the Mining / Tourism *Memorandum of Understanding* Encourage mineral exploration and development in mining/tourism areas
Aggregate Objectives			
1. Ensure a local supply of aggregate resources and explore opportunities for	1.1 Develop, and if practical, implement an aggregate resource management plan for the Lillooet area	Aggregate resources and development opportunities documented and appraised	The plan should address the following issues - resource assessment and
	1.2 In order to address acute		

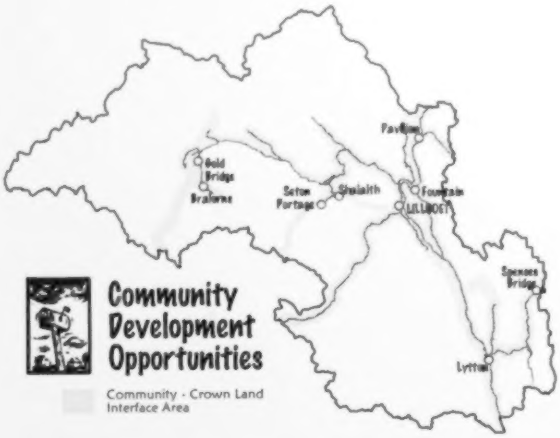
Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
export	shortages of publicly available aggregates in the Gold Bridge area, encourage major owners (e.g., Ministry of Transportation; BC Hydro) to share their reserves		inventory; - ownership and allocation (in particular, in the Gold Bridge area); - constraints on development; - aggregate supply and demand; - potential export opportunities; and - provincial, regional and municipal land use zoning (insofar as it pertains to aggregates).

3 Community Sections

3.1 *Communities*

Lillooet offers an attractive rural lifestyle for almost 6,500 people. Residents want to contribute to their communities by participating in land and resource decisions that may affect them. Their aim is to build prosperous communities with stable economies within a healthy environment.

The 2004 *Memorandum of Agreement* between Lillooet Timber Supply Area Community, Forest Economic Interests and the Province (see Appendix) is intended to maximize the benefits of plan implementation for local communities.



Issues:

- Citizens, local governments and community groups want to be involved in Crown land and resource decisions that will affect their quality of life.
- Community interests, as expressed in official community plans, rural land use bylaws and other plans, are not always considered in Crown land and resource decisions.
- Lack of collaboration between different orders of government can limit opportunities for community expansion or future infrastructure (e.g., solid waste disposal sites, fire halls, utilities).
- Threats to settlements and infrastructure from fire, floods and slides need to be managed.

Goals:

- Sustainable, economically healthy and safe communities supported by co-operative Crown land and resource management.
- Effective communications among all orders of government and community members regarding Crown land management near settled areas.

Objectives	Management Intent/Strategies	Measures of Success/Targets	Intent
1. Manage Crown land and resources in the community-Crown land interface area (see map) in a co-operative manner with consideration of	1.1 Involve local governments, First Nations, community organizations, and individuals in Crown land and resource management decision-making, particularly in the	Appropriate opportunities for community input into Crown land and resource decision-making (consistent with legislation, regulation and policy)	

Objectives	Management Intent/Strategies	Measures of Success/Targets	Intent
community interests including: • public safety; • *ecological* conditions; • infrastructure development; • economic development; • future expansion; • sustenance use; and recreation opportunities	interface area (see map)	Sharing of resource management information among all orders of governments, community organizations and the public Community and Crown land use plans available for consideration by all orders of government Adequate measures taken to minimize risks to communities from fire, flood, erosion, debris flows, and landslides due to resource development Consideration of community needs for future expansion and infrastructure before provincial reserves or single-use resource designations are established Sustenance and recreation opportunities for local residents continue Infrastructure improvements completed in support of 2010 Olympics	
	1.2 Facilitate sharing of resource management information among federal, provincial and local governments, First Nations, community organizations and the public, particularly within interface area		
	1.3 Promote consistent land use and zoning within the interface zone		
	1.4 Ensure the establishment of provincial reserves and designations for specified resource uses do not arbitrarily preclude future settlement expansion within the settlement land – Crown land interface		
	1.5 Maintain opportunities for non-forest uses (e.g., agriculture, community infrastructure, recreation and tourism) with consideration to environmental and social values in the vicinity of existing communities and agricultural areas		
	1.6 Ensure operational plans contain measures that will minimise, as much as practicable, risks from flooding, erosion, debris flows, and landslides to adjacent settlement lands		

Objectives	Management Intent/Strategies	Measures of Success/Targets	Intent
	1.7 Reduce and control potential fire hazards threatening community *settlement and infrastructure* in the interface area		
2. Support community-driven efforts to expand or diversify the local economies (e.g., implementation of the 2004 *Memorandum of Agreement*)			

3.2 *First Nations*

Twenty-eight First Nations from four broad cultural groups (St'at'imc, Nlaka'pamux, Secwepemc and Tsilhqot'in) use the area for sustenance, cultural and spiritual activities. Twelve have communities within the plan area and share its use with sixteen others.

About half of the people who live in the plan area are aboriginal and many of these people live in centres such as Lillooet, Lytton, Shalalth and Spences Bridge.

Aboriginal people contribute significantly to the area's monetary economy and also participate in their own informal, traditional economy.

Very few bands of the Nlaka'pamux, St'at'imc, Secwepemc, and Tsilhqot'in First Nations participated in plan development, and no First Nation has endorsed the plan. Discussions continue. Some government-to-government protocol agreements and letters of understanding have been signed. These will help First Nations engage in reviewing and implementing the plan. A key agreement is the Government-to-Government protocol between the Province and the St'at'imc Chiefs' Council signed June 7, 2004 (see Appendix).

Issues:

First Nations that participated in plan development identified the following concerns:

- Land use plans do not address aboriginal title, which is often the primary interest of First Nations;
- First Nations' land-based information and knowledge (e.g., traditional land uses, management practices, spiritual values) have not been adequately incorporated into Crown land management;
- Some land-based information is sensitive and First Nations seek to maintain its confidentiality;
- Some First Nations have expressed concern about difficulties accessing government information;
- First Nations have concerns about potential impacts of resource development and uses on aboriginal rights, title and traditional uses. These concerns are heightened in certain priority areas of interest;
- First Nations perceive that land use planning fails to adequately consider their aboriginal rights to fish, hunt and carry out other traditional practices;

- First Nations are concerned about the cumulative effects of various types of Crown land tenure and use on the sustainability of ecosystems;
- There are concerns from First Nations that they will not have meaningful input into plan implementation;
- First Nations are concerned about lack of opportunities to pursue land-based economic development initiatives that build upon their knowledge, expertise, practices and interests.

Goals:

- Enhanced economic development opportunities for First Nations.
- Sustained or enhanced cultural and environmental values.

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Consider First Nations' information and knowledge to strengthen land and resource management		First Nations involvement in Lillooet LRMP implementation	
2. Respect First Nations' desire to protect the confidentiality of certain land-based information		Sharing of information and data among First Nations, resource developers and decision makers, with appropriate confidentiality	
3. Consider asserted aboriginal rights and traditional uses in resource management		Concluding the identification of First Nations' interests in new protected areas by 2006	
4. Strive to improve the efficiency of consultation procedures		Concluding protocol, enabling or management agreements with most First Nations by 2007	
5. Develop common understandings with First Nations on sustainable resource management		Resolution of First Nations' priority areas of interest	
6. Establish information and data sharing agreements with First Nations		Sharing of information and data among First Nations, resource developers and decision makers, with	

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
		appropriate confidentiality	
7. Foster planning partnerships between First Nations and other governments or businesses (e.g., Sustainable Resource Management Plans)		Implementation of protocol agreements with First Nations (e.g., Esketemc; St'at'imc) commencing in 2004	
8. Identify and pursue initiatives with First Nations that support economic development (e.g., economic measures agreements)		Viable First Nations land-based economic development initiatives	

3.3 *Cultural and Historical Resources*

Human settlement in the plan area dates back thousands of years. There are many archaeological and historical sites.

Most archaeological sites are found along valley bottoms and on benches beside the main rivers.

Stein and Botanie valleys are examples of traditional use areas where important local and regional gatherings took place.

The Fraser and Thompson rivers were valuable travel corridors in the early days of European exploration and subsequent development of the province.

The Harrison-Lillooet corridor was the first established route to the Cariboo gold fields and was heavily used during the Gold Rush to Barkerville.

Issues:

- Lack of recognition and conservation of aboriginal cultural symbols (e.g., rocks and landforms)
- Destruction of important symbols and artifacts.
- Existing legislation does not protect some archaeological, traditional use and historical sites and areas.
- The *Heritage Conservation Act* may not meet the needs of First Nations and communities to recognize and manage cultural heritage resources.

Goals:

- Appropriate management, interpretation and protection of cultural and historical resources including archaeological, traditional use and historic sites

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Manage cultural and historic	1.1 Improve the quantity and quality of information about	Completed archaeological impact	

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
resources through appropriate recognition, conservation and protection measures	traditional use areas and archaeological sites potential throughout the plan area	assessments	
	1.2 Inventory and evaluate pre and post-contact cultural heritage resources and manage them through appropriate means, such as formal designations (involving appropriate referrals), specific heritage resource plans and plans for other resources, according to their relative value to society (e.g., regional, provincial, national significance)	Designated archaeological sites under the *Heritage Conservation Act* Archaeological resource value mitigation measures incorporated into resource development proposals	
	1.3 Manage archaeological sites as components of larger complexes which reflect the impact of ecological conditions and social values on past settlement and land use		
	1.4 Work closely with First Nations, in a manner that respects First Nations Indigenous Intellectual property and rights, to identify areas of traditional use and archaeological sites and to discuss appropriate management strategies		
2. Minimize loss of archaeological resources, values and information through prudent management of impacts upon known and probable sites	2.1 Use Traditional Use Study information for prediction of sites	Archaeological resource value mitigation measures incorporated into resource development proposals	
	2.2 Strengthen First Nations' input on traditional uses through government-to-government protocols on LRMP implementation		
	2.3 Do archaeological impact assessments as appropriate and manage impacts to latest guidelines		
	2.4 Consider the relative values of specific sites and balance archaeological values in the context of other resource values		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	when making site recommendations		
3. Manage First Nations cultural symbols (e.g., traditionally used plants, animals, and natural features), so that their value is acknowledged in planning for other resource activities			
4. Consider interests of the Province, First Nations, tenured licensees and local communities and encourage dialogue to reconcile issues	4.1 Encourage dialogue between First Nations, resource licensees and government agencies to improve processes by which resource development and cultural heritage interests can be reconciled	Cultural and historical resource agreements between First Nations, resource licensees and government agencies	
5. Manage location information for culturally important symbols and archaeological resources to ensure that the interests of the Province, tenured licensees and First Nations are addressed		Completed heritage resource plans	

3.4 *Visual Landscape Management*

The appearance of local landscapes is important to people who live, work and recreate in the plan area. Due to terrain, most activities have the potential to affect visual quality.

Visual design principles are encouraged for use throughout the plan area. These include:

- scale of alteration;
- appearance of openings;
- shape of openings;
- fit to landform;
- use of natural features and patterns;
- trees left for screening; and
- choice of silvicultural system.

The plan identifies two visual management zones (see map):

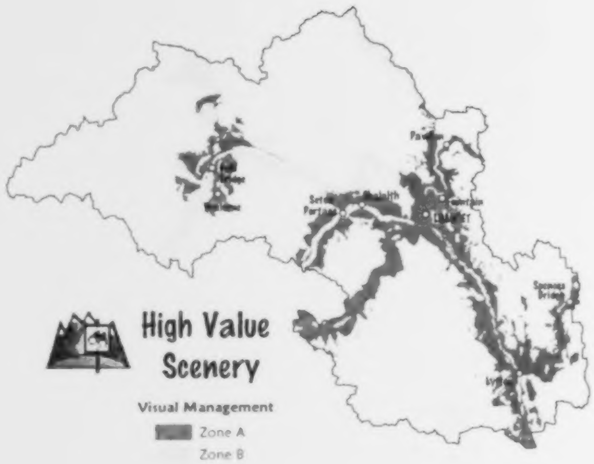
- Zone A – areas of high visual importance along paved travel corridors and adjacent to communities;
- Zone B – areas of moderate visual importance, or, areas where inventories have not been completed.

Issues:

- Forest and non-forest development activities can reduce visual quality
- Visual inventories are incomplete

Goals:

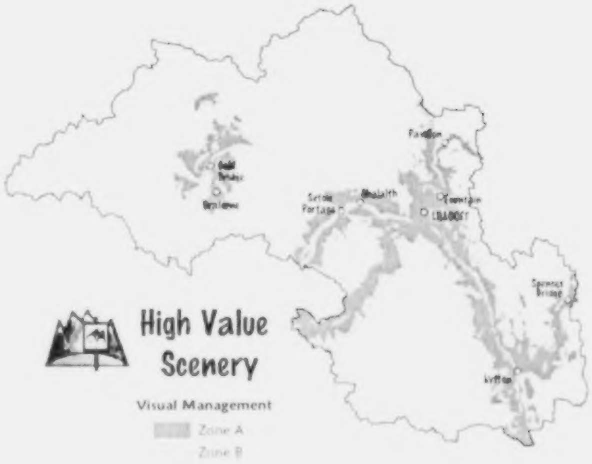
- Attractive landscapes that promote enjoyment of the natural surroundings, while balancing visual design with economic and environmental considerations



Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1 Manage areas within Zone A as known scenic areas; and manage areas within zone B to reduce the visual impact of harvesting activities (see map)	1.1 Establish visual quality objectives for Zone A (see map)	Formal establishment of scenic areas and visual objectives within one year of confirming boundaries for Zone A Visual quality objectives for Zone A achieved	These areas will be managed under provisions of the *Forest and Range Practices Act*, as known scenic areas with established visual quality objectives. Visual impact assessments will be required. Developments must borrow from natural line and form and follow natural boundaries (creeks, ridges, draws, topography breaks, natural types) and look natural in shape and scale
	1.2 In Zone B (see map), attempt to achieve visual quality classes	Formal establishment of scenic areas and visual objectives within one year of confirming boundaries for Zone B Forest development incorporates visual	Areas of high visual importance that have not been inventoried. Manage areas with broad visual quality classes to provide general management targets while maintaining operational flexibility. Visual simulations from key viewpoints will be required. Developments must borrow from natural line and

The plan identifies two visual management zones (see map):

- Zone A – areas of high visual importance along paved travel corridors and adjacent to communities;
- Zone B – areas of moderate visual importance, or, areas where inventories have not been completed.



Issues:

- Forest and non-forest development activities can reduce visual quality
- Visual inventories are incomplete

Goals:

- Attractive landscapes that promote enjoyment of the natural surroundings, while balancing visual design with economic and environmental considerations

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1 Manage areas within Zone A as known scenic areas; and manage areas within zone B to reduce the visual impact of harvesting activities (see map)	1.1 Establish visual quality objectives for Zone A (see map)	Formal establishment of scenic areas and visual objectives within one year of confirming boundaries for Zone A Visual quality objectives for Zone A achieved	These areas will be managed under provisions of the *Forest and Range Practices Act*, as known scenic areas with established visual quality objectives. Visual impact assessments will be required. Developments must borrow from natural line and form and follow natural boundaries (creeks, ridges, draws, topography breaks, natural types) and look natural in shape and scale
	1.2 In Zone B (see map), attempt to achieve visual quality classes	Formal establishment of scenic areas and visual objectives within one year of confirming boundaries for Zone B Forest development incorporates visual	Areas of high visual importance that have not been inventoried. Manage areas with broad visual quality classes to provide general management targets while maintaining operational flexibility. Visual simulations from key viewpoints will be required. Developments must borrow from natural line and

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
		design principles Visual landscape inventories completed	form and follow natural boundaries (creeks, ridges, draws, topography breaks, natural types) and look natural in shape and scale
	1.3 Use visual design principles throughout the rest of the plan area to borrow from natural line and form		It is anticipated that future harvesting which is based more on visual design principles will appear more natural and may require shorter green-up periods to blend back in
	1.4 During forest development planning and activities, outside of Zones A and B, and within areas associated with recreation trails and sites specified by the District Manager, maintain the appearance of a diverse landscape		Cascades Forest District, in consultation with MSRM, will determine the location of identified recreation trails and sites to be managed (see Table 1 in Tourism and Recreation)
2. Manage non-forest development to achieve attractive landscapes	2.1 Incorporate consideration of visual resources into non-forest resource developments (e.g. urban developments, recreation and tourism facilities, utility corridors, mine development) Consider using visual impact assessment as a tool to assist in evaluating impacts to visual resources		To consider appropriate provisions (e.g., visual screening, utilizing landscape design principles) for visual resource management in planning and development for non-forest development activities

3.5 *Access and Transportation*

Sound management of access and transportation is needed for the sustainable development of the area's abundant resources. The first part of this section addresses access management; the second part, Transportation

3.5.1 Access

In this plan, access refers to entry onto Crown land, by ground, water or air. Access management is a term that describes how the different types of access can be used to meet a variety of goals.

The goals of access management include:

- supporting responsible development of the area's agricultural, mineral, range, timber, tourism and other resources;
- contributing to healthy, local communities;
- addressing the needs of fish and wildlife; and
- providing opportunities for recreational use by residents and visitors.

This plan balances competing demands for access by managing:

- types of use (e.g., mechanized, non-mechanized, motorized, non-motorized);
- areas of use;
- seasons of use (spring, summer, winter, all-season); and
- types of users (industrial, commercial, public, recreational).

Issues:

- Lack of access management planning, especially for undeveloped watersheds.
- Lack of a public process to define appropriate access management or to resolve conflicts. Access planning processes need to include the interests of First Nations, resource developers, user groups and the public.
- Costs of road maintenance and access controls are not always borne by users.
- Access restrictions can limit opportunities for resource development.
- Access restrictions can have positive and negative impacts on recreation opportunities.
- Access controls do not replace adequate law enforcement, for example, against poaching.
- Some access controls can only be effective if combined with other measures, such as education.
- Unauthorized entry past locked gates can defeat their purpose
- Important or historic trails and roads can be damaged by new road development.
- The public seeks better access to lakes, rivers and reservoirs, including boat-launching facilities.
- Helicopters and floatplanes can affect wildlife and wilderness values but open up more areas for use.
- Specific areas urgently need access management measures, for example to help conserve wildlife or reduce overuse or damage.

Goals:

- A well-planned and carefully managed system of access that balances short and long-term economic, social, cultural and environmental needs.

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
Manage access to maintain identified values described in Table 1, priority Access Management Measures	Use a variety of access controls to minimize or mitigate impacts	Priority access management measure implemented by 2006	
Manage access in accordance with seasonal access maps	See Table 2		See Table 2

Access Management Approach

The approach to access management is shown on four seasonal access maps (*Spring Access, Summer Access, Winter Access* and *All-Season Access*). The approach will be phased in over the life of the plan, as resources are available. Priority access management measures are shown in Table 1. Access management terms and management intent are explained in Table 2.

The management approach applies only to multiple-use areas (that is, Crown land outside parks and ecological reserves). Park plans determine access within protected areas. The approach provides information for statutory decision makers to consider along with the economic, technical and site-specific conditions of each proposal for development. As with the rest of the plan, access management will be implemented by regulatory agencies, resource developers, tenure holders and area users, as appropriate.

The access management approach focuses on ground-based access (roads, trails) since this is the most common means and because air and water navigation is primarily a federal responsibility. In certain cases, air and water access can be managed through conditions on tenures or business permits.

Climate and topography create many natural barriers to access. Snow pack and rock slides can create undisturbed habitat that benefits wildlife. The plan takes advantage of these natural barriers to regulate motor vehicle access without costly control measures such as gates.

Multiple-use areas are open to industrial and commercial users to carry on their businesses. In developing or using these areas, and roads within them, businesses may need to address other resources, values and uses (e.g., by restricting non-business use or modifying their own use).

All multiple-use areas are open to all users for non-motorized and non-mechanized access.

Table 1: Priority Access Management Measures

Location	Access Management Measure	Comments
Texas Creek road downstream of junction with Molybdenite road	Close roads to public motor vehicle use in spring (May 1 to June 30)	Purpose is to minimize impacts to grizzly bear habitat. Existing tenure holders are allowed continued access to maintain their infrastructure and/or improvements. New tenure holders should minimize use in spring.

Location	**Access Management Measure**	**Comments**
Texas Creek watershed	Close watershed to off-road, public motor vehicle use in spring (May 1 to June 30)	Purpose is to minimize impacts to grizzly bear habitat.
Van Horlick Creek road, at bridge at 8 kilometres	Close road to public motor vehicle use in spring (May 1 to June 30)	Purpose is to minimize impacts to grizzly bear habitat. Temporary access control preferred (e.g., gate, lock block, abutments, etc.). Consider bridge removal if temporary control fails.
Davey Jones Creek road	Close road to public motor vehicle use in spring (May 1 to June 30)	Purpose is to support regulated access management area at Red Mountain. Temporary access control preferred (e.g., gate, lock block, abutments, etc.). Consider bridge removal if temporary control fails.
Red Mountain road	Close road to public motor vehicle use in spring (May 1 to June 30)	Purpose is to support regulated access management area at Red Mountain. Temporary access control preferred (e.g., gate, lock block, abutments, etc.). Consider bridge removal if temporary control fails.

Table 2: Access Management Terms and Management Intent

Term	**Description and Management Intent**
Control point: A feature that controls access on a road; includes constructed features such as gates, ditches or berms as well as natural blockages	• Use natural barriers (e.g., snow pack) as much as possible to meet environmental objectives but supplement them where necessary • Shown on each access map
Areas managed by regulation: Areas established under legislation (e.g., *Wildlife Act*, *Forest and Range Practices Act*) to manage motor vehicles	• The plan proposes no change to permit requirements for industrial or commercial users • Areas include: year-round *Wildlife Act* restrictions at Red Mountain, China Head, French Bar, Nine Mile Ridge; June to November *Wildlife Act* restrictions at Spruce Lake; and year-round *Forest and Range Practices Act* restrictions on recreational use at Bonanza Creek • These areas will be reviewed during plan implementation to ensure they complement the plan's approach to access management • Shown on each access map
Road density reduction areas: Areas with more roads than are needed to sustain resource	• Intent is to close or decommission roads that are inactive and costly to maintain or that pose a risk to public safety or the environment • Closing or decommissioning roads is the responsibility of permit

development	holders, resource developers or government agencies, as appropriate • Shown on the *All-Season Access* map
Currently unroaded areas: Areas without roads	• To maintain wildlife habitat and remoteness, new resource roads will be dedicated for industrial or commercial use only and closed when no longer needed • Shown on the *All-Season Access* map
Seasonal access management areas: Areas that have premium habitat for certain vulnerable species, such as mule deer in the winter or grizzly bears in the spring	• Intent is to reduce motorized vehicle traffic for part of the year to meet defined environmental objectives • Limitations on access apply mainly to public and recreational users • These areas may be used for industrial or commercial purposes but users may need to limit or prevent non-business traffic and mitigate their own access-related impacts • Shown on the *Spring Access*, *Summer Access*, and *Winter Access* maps
Winter non-mechanized recreation: Areas that provide dedicated opportunities for back-country skiers, other non-motorised winter recreation use	• Snowmobilers and other mechanized recreational users are encouraged to avoid them • Open to industrial and commercial use, including new resource roads, but impacts to recreational users should be considered • Shown on the *Winter Access* map

3.5.2 Transportation

Transportation is essential for the movement of goods and people in the area as well as the vitality of local communities and the economy. The area has three major rail lines (Canadian National, Canadian Pacific and BC Rail).

Local communities depend heavily on the condition of major access routes. Due to rugged terrain, many roads are narrow, winding or steep. Some are prone to rockslides or avalanches. Construction and maintenance costs are high.

Future improvements to transportation infrastructure will depend on, and contribute to, continued development of the area's forest, agricultural, mineral, tourism and other resources.

Issues:

- Planning needs to address long-term requirements for new transportation corridors as land use patterns change.
- First Nations seek participation in transportation infrastructure planning in order to incorporate their land uses and practices and gain access to land and resources.
- Aesthetic and environmental values need to be considered in transportation corridor planning.
- Resource managers often fail to recognize the need to modify or improve existing transportation corridors.
- Jurisdiction over some roads is in dispute and needs resolution.
- Economical sources of gravel for road maintenance and construction are scarce. Securing existing and future resources is an ongoing challenge.

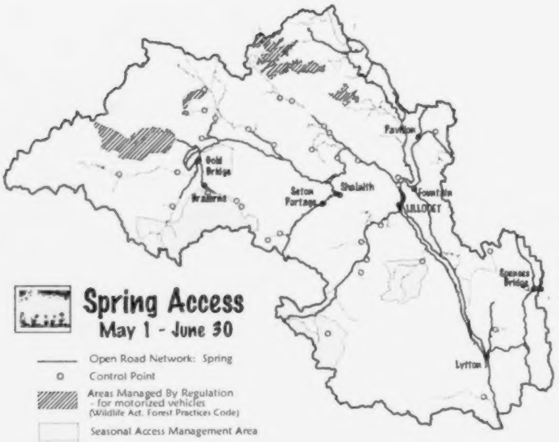
- Communities and road users want to be better informed about road development planning as well as construction and maintenance schedules.

Goals:

- An efficient and effective transportation and communication infrastructure that balances economic, environmental and community values

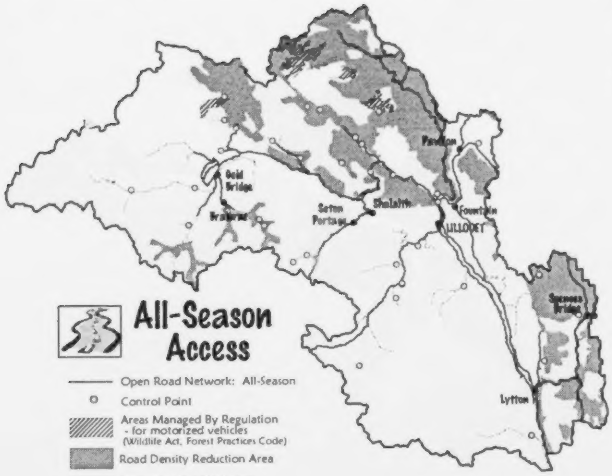
Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Ensure transportation planning processes consider approved land use plans, the interests of local governments, First Nations, communities and the public	1.1 Communicate updates to transportation and utility corridors through the LRMP monitoring process		
	1.2 Maintain public road infrastructure by transferring Ministry of Forests' roads to Ministry of Transportation in appropriate cases (e.g., consider transfer of the Hurley Forest Road to MOT)		
2. Incorporate aesthetic and environmental values into road construction and maintenance	2.1 Utilize existing utility corridors and infrastructure as much as possible to prevent further impacts to the landscape (e.g. twin energy and utility uses along existing corridors wherever possible)		
	2.2 Develop access and/or access plans in recognition of First Nation interests, including protecting sensitive First Nation information		
3. Maintain options for improving rights-of-way	3.1 Corridor development is to allow for sufficient mitigation/compensation so as to reduce impacts to other resource values		This is not intended to override referral and approval processes at the project stage, but to recognize that the establishment of boundaries for protected areas and land use zoning need to be flexible where they abut existing land uses
	3.2 Allow flexibility in land use management for integration and development of potential new corridors		
4. Improve existing roads (e.g., adding	4.1 Ensure that a bridge replacement program for the key	Improved road alignments or	

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
turnouts or passing lanes; replacing temporary bridges with permanent ones)	transportation routes is designed to upgrade the numerous temporary structures in the plan area, and that the public is provided with the opportunity to comment on the program such that it minimizes impacts to both businesses and the public	completed road improvement projects Temporary bridges replaced by permanent ones	
5. Agencies responsible for the development and maintenance of access will coordinate activities to ensure that roads built or maintained by the province are under the provincial authority	5.1 Provincial agencies issuing road permits should work cooperatively with private land owners, the federal government and First Nations in order to acquire legal access for roads (which do not currently have a gazetted right of way) that cross private or federal lands	Road jurisdiction issues ("trespass" roads) resolved	
6. Provide access to sand and gravel consistent with LRMP direction for other resource values	6.1 Where new applications for sand and gravel quarries are being considered, consider the LRMP direction for other resource values	Sand and gravel sources identified, evaluated or reserved	
7. Communicate maintenance and construction information to local residents and the public	7.1 Minimize impacts from bridge and ditch maintenance as well as ravelling of cut slopes, such as habitat loss, sedimentation, road chemical pollution, etc.	Readily available information on road maintenance and construction projects Readily available access and road attribute information	
	7.2 The Ministry of Forests and Ministry of Sustainable Resource Management should make road and access attribute information available to First Nations, stakeholders and the general public (e.g., location of where summer four-wheel drive access is available and the location of spring closures for grizzly bear management, etc.)		


Gold Bridge
Bralorne
Seton Portage
Shalalth
Pavilion
Fountain
LILLOOET
Spences Bridge
Lytton

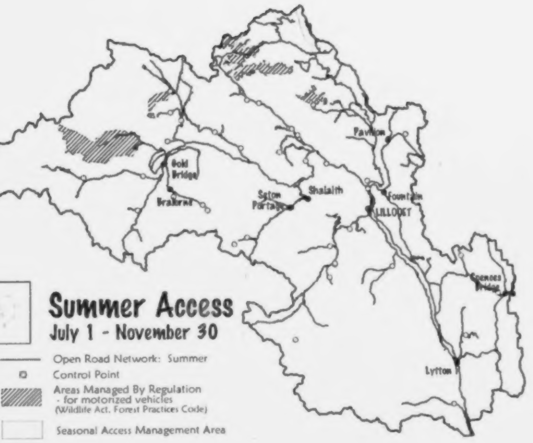
Spring Access
May 1 - June 30

- Open Road Network: Spring
- Control Point
- Areas Managed By Regulation - for motorized vehicles (Wildlife Act, Forest Practices Code)
- Seasonal Access Management Area


Gold Bridge
Bralorne
Seton Portage
Shalalth
Pavilion
Fountain
LILLOOET
Spences Bridge
Lytton

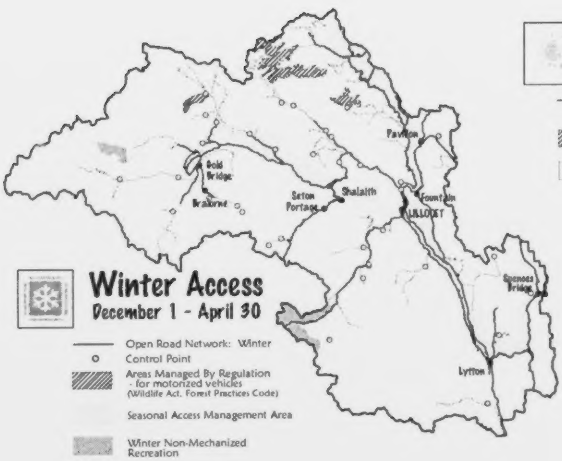
All-Season Access

- Open Road Network: All-Season
- Control Point
- Areas Managed By Regulation - for motorized vehicles (Wildlife Act, Forest Practices Code)
- Road Density Reduction Area
- Currently Unroaded Area


Gold Bridge
Bralorne
Seton Portage
Shalalth
Pavilion
Fountain
LILLOOET
Spences Bridge
Lytton

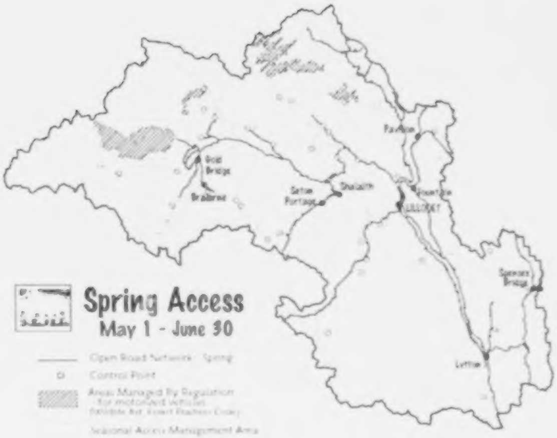
Summer Access
July 1 - November 30

- Open Road Network: Summer
- Control Point
- Areas Managed By Regulation - for motorized vehicles (Wildlife Act, Forest Practices Code)
- Seasonal Access Management Area


Gold Bridge
Bralorne
Seton Portage
Shalalth
Pavilion
Fountain
LILLOOET
Spences Bridge
Lytton

Winter Access
December 1 - April 30

- Open Road Network: Winter
- Control Point
- Areas Managed By Regulation - for motorized vehicles (Wildlife Act, Forest Practices Code)
- Seasonal Access Management Area
- Winter Non-Mechanized Recreation


Spring Access
May 1 - June 30
Open Road Network: Spring
Control Point
Areas Managed By Regulation
- for motorized vehicles
(Wildlife Act, Forest Practices Code)
Seasonal Access Management Area
Gold Bridge
Bralorne
Seton Portage
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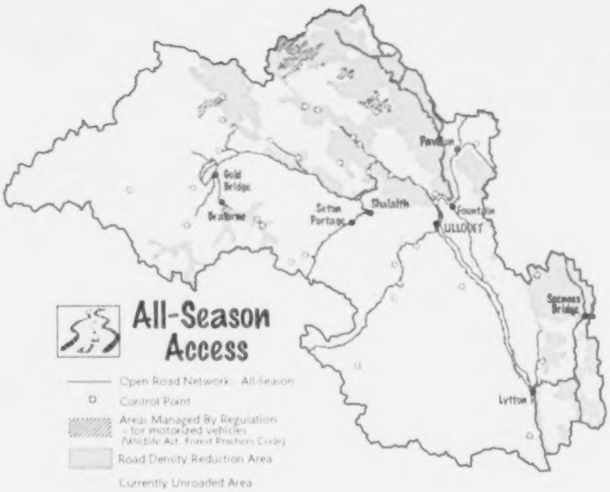
Pavilion
Fountain
LILLOOET
Spences Bridge
Lytton


All-Season Access
Open Road Network: All-Season
Control Point
Areas Managed By Regulation
- for motorized vehicles
(Wildlife Act, Forest Practices Code)
Road Density Reduction Area
Currently Unroaded Area
Gold Bridge
Bralorne
Seton Portage
Shalalth
Pavilion
Fountain
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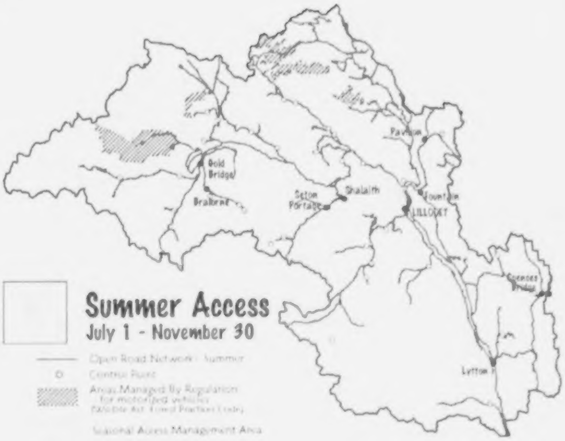
Lytton


Summer Access
July 1 - November 30
Open Road Network: Summer
Control Point
Areas Managed By Regulation
- for motorized vehicles
(Wildlife Act, Forest Practices Code)
Seasonal Access Management Area
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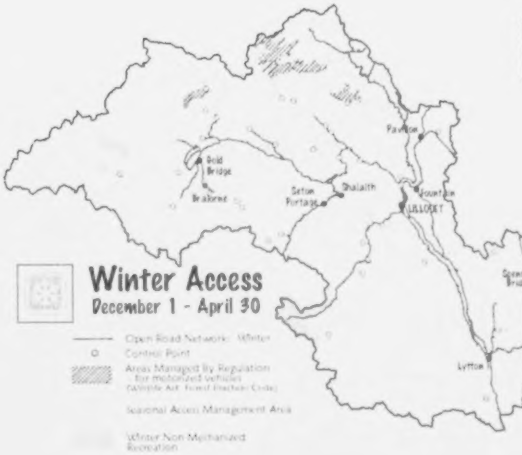
Winter Access
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Open Road Network: Winter
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Areas Managed By Regulation
- for motorized vehicles
(Wildlife Act, Forest Practices Code)
Seasonal Access Management Area
Winter Non-Mechanized Recreation
Gold Bridge
Bralorne
Seton Portage
Shalalth
Pavilion
Fountain
LILLOOET
Spences Bridge
Lytton

4 Environmental Sections

4.1 *Fish and Riparian Habitat*

Fishing is important for commercial, sport, recreation, tourism and food purposes.

Thirty-three species of fish have been identified in the plan area. Coho salmon, steelhead, bull trout (blue-listed) and white sturgeon (red-listed) populations are of special concern.

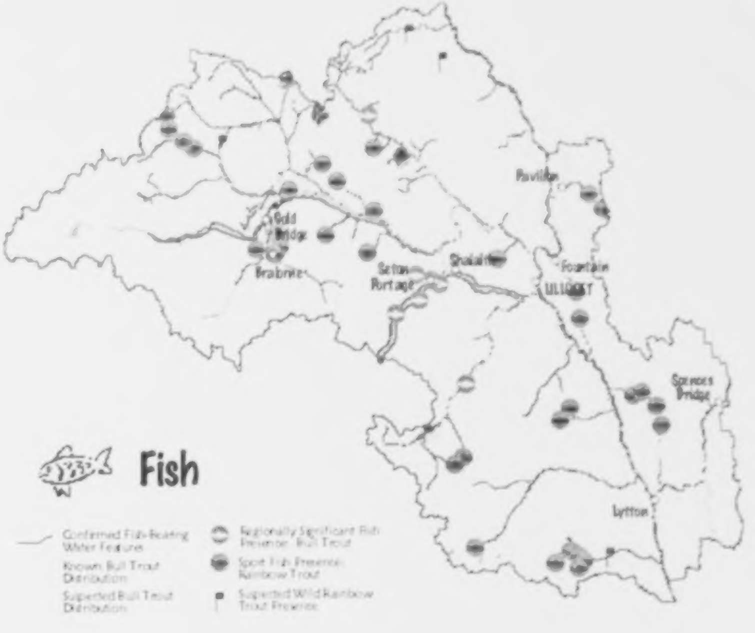
Riparian Habitat (habitat adjacent to a lake, stream or river, influenced by surface water) is vitally important for many species, particularly fish, amphibians, moose, grizzly bear and many birds. Riparian forests are also highly productive timber areas and are important to the agriculture industry.

This section addresses fish, in general, and riparian habitats. Management direction for bull trout and white sturgeon is included in the Species at Risk section.

Issues:

Need for better information on fish and the location and type of the habitat they use, particularly for bull trout and white sturgeon.

- Fish mortality and loss of fish habitat due to hydroelectric facilities and resource development activities.
- Summertime stream temperatures in the eastern part of the plan area may be too hot for fish.
- Some degraded fish habitats require restoration.
- Basic legal requirements may not conserve and protect riparian areas around small, fish-bearing streams and non-fish-bearing streams.


Pavilion
Gold Bridge
Bralorne
Seton Portage
Shalalth
Fountain
LILLOOET
Spences Bridge
Lytton
Fish
Confirmed Fish-Bearing Water Features
Known Bull Trout Distribution
Suspected Bull Trout Distribution
Regionally Significant Fish Presence: Bull Trout
Sport Fish Presence: Rainbow Trout
Suspected Wild Rainbow Trout Presence

- Forest health management can lead to a loss of riparian vegetation.

Goals:

- Viable fish populations in naturally diverse habitats and healthy riparian areas

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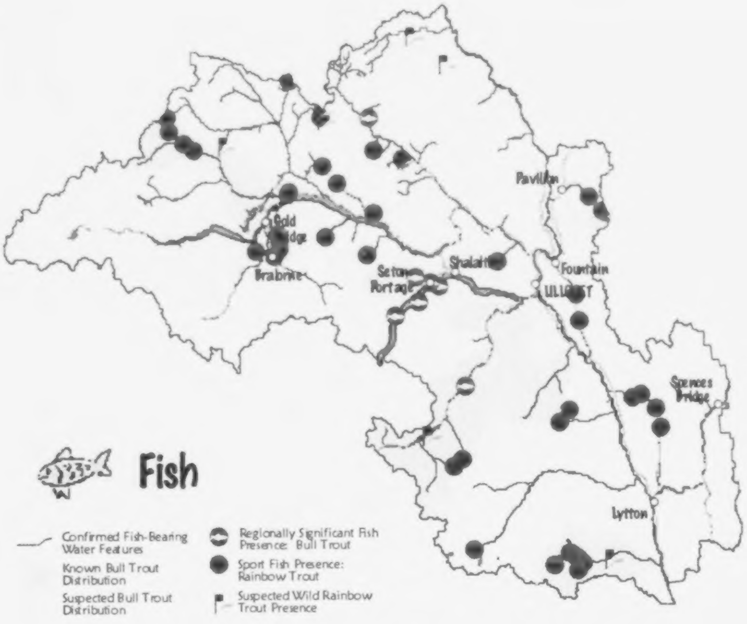
Fish
Confirmed Fish-Bearing Water Features
Known Bull Trout Distribution
Suspected Bull Trout Distribution
Regionally Significant Fish Presence: Bull Trout
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Suspected Wild Rainbow Trout Presence
Pavilion
Gold Bridge
Bralorne
Seton Portage
Shalalth
Fountain
LILLOOET
Spences Bridge
Lytton

- Forest health management can lead to a loss of riparian vegetation.

Goals:

- Viable fish populations in naturally diverse habitats and healthy riparian areas

4.1.1 Fish Habitat Management

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Improve knowledge and access to information about fish habitat and populations	1.1 First Nations knowledge of the plan area fisheries resource should be incorporated in fish and fish habitat inventories	Information available about fish populations and habitat	
	1.2 Forest development proponents and agencies should complete fish and fish habitat inventories according to priorities identified in consultation with agencies and interests. Coordinate inventory efforts with WLAP and MSRM agency workplans		
	1.3 Identify and map spawning, rearing and staging/holding congregation areas within all streams during inventories		
	1.4 Identify and classify all fish bearing streams and direct tributaries to fish bearing streams.		
	1.5 Government agencies, Crown corporations and others completing inventories should provide their data and maps to the Ministry of Sustainable Resource Management		
	1.6 Maintain and update the fish distribution maps, and the database of fish distribution and fish habitat as new information becomes available		
	1.7 Government agencies are to make fish distribution and fish habitat information available to resource users and resource managers, including First Nations. Maps and data indicating locations where species are vulnerable (e.g. bull trout congregation areas, key sturgeon habitat) must only be used for resource management planning, and must not be widely distributed		
2. Restore and improve integrity of priority watersheds	2.1 Complete priority watershed restoration projects	Completed watershed restoration projects	Use the Lillooet Forest District Watershed Screen Tool (August, 2000) and detailed
	2.2 Annually WLAP, the Ministry of Forests (MOF) and DFO should solicit information from First Nations, tenure		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	holders and the public to co-operatively rank priority watershed restoration projects, and define project responsibilities		watershed assessments
	2.3 Implement restoration activities, such as road deactivation, and re-vegetation of riparian zones within priority watersheds, where watershed management plans indicate, to restore watershed integrity to pre-disturbance conditions where possible		
3. Establish and/or maintain adequate water flows and hydroelectric reservoir levels to maintain fish and fish habitat	3.1 Gaps in reservoir inflow and outflow data should be filled through further inventory by government agencies and hydroelectric operators	Fish habitat supported by hydroelectric reservoir levels and downstream water flows	
	3.2 Address water flow and reservoir levels in the Seton, Lower and Middle Bridge watersheds through implementation of the *Bridge River Water Use Plan*, September 2003		
	3.3 Using procedures defined by the Ministry of Water, Land and Air Protection and the Department of Fisheries and Oceans, operators of existing small scale power plants or proponents of new facilities should determine water flow regimes necessary to maintain fish and fish habitat for review by WLAP and DFO during proposal evaluation		
	3.4 Consider the following during water use planning for existing or additional hydroelectric facilities: • fish and fish habitat should not be adversely affected; • the water budget should be reallocated to balance requirements with fish habitat; • impacts from regulated flows on natural hydrological and sediment regimes, such as lack of gravel recruitment and disruption of natural fish movement patterns, should be reduced by developing		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	flow and sediment transport regimes that mimic the natural hydrological cycle as much as possible; and • the frequency and magnitude of damaging spills should be minimized at facilities on Bridge and Seton River		
4. Reduce fish mortality due to funnelling (entrainment) into hydroelectric turbines	4.1 BC Hydro, DFO and WLAP should work cooperatively to improve the understanding of how fish are funnelled (entrained) into hydroelectric turbines	Limited fish mortality due to hydroelectric turbines	
	4.2 During the water use planning processes, alternative operational practices to reduce fish entrainment and mortality should be examined		
	4.3 Implement initiatives to minimize fish kill in turbines and intakes (i.e., hydro-acoustics, screening, louvers)		
5. Develop and implement appropriate practices for designated temperature sensitive streams	5.1 Identify and designate temperature sensitive streams by: • Reviewing fish distribution maps and biogeoclimatic zone maps to identify areas where temperature sensitive streams may exist • Considering the Crown land versus non-Crown land impacts on temperatures in potentially sensitive streams • Collecting additional information on stream temperatures (particularly in upland areas) to identify remaining cool water refugia	Temperature sensitive streams inventoried & designated Development and application of appropriate forest management practices for temperature sensitive streams	
	5.2 Develop practices that are appropriate for the conditions in the plan area to provide shade on identified temperature sensitive streams and their direct tributaries. Include these practices in operational plans		
	5.3 Consider aspect, slope, and other		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	biophysical features of the basin(s) around temperature sensitive streams and their tributaries when developing appropriate practices for particular sites		
6. Where stream temperatures are currently above tolerance levels for fish, where feasible, implement strategies to reduce temperatures to tolerable levels	6.1 The Ministry of Water, Land and Air Protection and the Department of Fisheries and Oceans should communicate the temperature sensitive streams needing rehabilitation broadly in local communities and to stewardship groups to encourage rehabilitation projects	Rehabilitation projects completed to reduce stream temperatures to tolerable levels for fish	
	6.2 Rehabilitation projects should be reviewed by WLAP and DFO for technical feasibility		
7. Maintain fish and fish habitat during development of utility corridors, roads and subdivisions	7.1 Development proponents and agencies should communicate through referrals, best management practices, professional reliance and other existing operational level procedures to identify practices and alternatives to maintain fish and fish habitat		
	7.2 Implement practices during development to minimize sedimentation and loss of riparian habitat		

4.1.2 Riparian Habitat Management

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Manage resource development and use activities to maintain or enhance riparian habitats that sustain healthy aquatic ecosystems supporting viable fish and wildlife populations	1.1 Continue to manage S1 – S3 streams as per current legislation	Mineral and placer activities in riparian areas consistent with current legislation and regulations (e.g., Health, Safety and Reclamation Code for Mines in British Columbia; Inter-Agency Memorandum of Understanding) Forest management in riparian areas consistent with current legislation	To maintain riparian integrity and function. The definitions for streams are the *Forest and Range Practices Act* definitions as they may be amended from time to time. To encourage flexibility and variation of application to meet the unique needs of specific
	1.2 Consistent with best management practices, where windthrow risk is moderate or high in the reserve zone, a sufficient number of trees should be retained within the management zone to protect the wind firmness of the reserve zone		

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
	1.3 Retain wildlife trees that do not pose a risk to workers within the management zone adjacent to the reserve zone	and regulations (e.g., *Forest and Range Practices Act*; Forest Planning and Practices Regulation; Riparian Management Area Guidebook)	stream systems. For all stream classes, continue to use as guidelines the maximum overall levels of basal area retention within the riparian management zone. Variances in buffer widths can occur as per the current guidelines. Retain wildlife trees where practicable within the management zone. Consistent with the objectives for riparian management areas in community watersheds: minimize the impacts of forest and range use on stream and lake water quality by providing a vegetated buffer and filter between those activities and the streams. Maintain stream channel stability by protecting stream banks and stream bank vegetation and by ensuring that a long-term supply of large wood is available for stream channel processes For the purposes of this strategy, a qualified person or persons must have education and expertise in riparian values, fisheries and wildlife values, stream hydrology and timber harvesting
2. Maintain the	2.1 The primary approach in		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
function of riparian areas by minimizing the impact of forest health management activities directed at preventing bark beetle outbreaks	riparian areas should be sanitation, which might include tree removal, rather than salvage		
3. Increase knowledge and information available on riparian ecosystems	3.1 Initiate research to assess the effectiveness of current management for maintaining riparian values (not only for fish) for all streams		Lillooet-specific work is required on this issue, which should tie into provincial work that is underway
	3.2 Complete stream inventories for the plan area, where fish presence information is lacking		

4.2 *Wildlife*

The plan area supports an abundance of wildlife and a diversity of species.

This section includes resource management direction for larger animals, specifically elk, moose, mountain goat and mule deer.

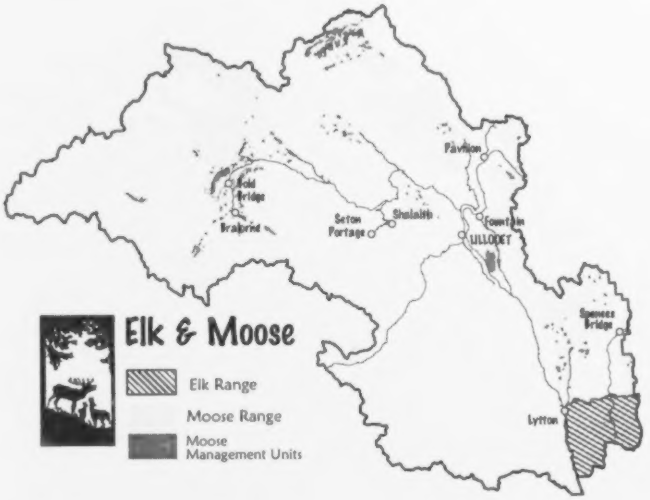
Section 4.3 addresses species at risk including tailed frog, fisher, bull trout, white sturgeon, bighorn sheep, grizzly bear, and spotted owl.

4.2.1 Elk

The current population is about 100. To remain healthy, elk need security and snow interception cover, adequate forage, and movement opportunities, especially between summer and winter habitats.

Issues:

- Reduction in the quality and distribution of essential habitat including snow interception cover, forage, security cover and movement opportunities.



- Increased mortality risk from unregulated hunting, poaching, stress, uncontrolled access and expanding settlement.
- Management for elk can adversely affect agricultural use.

Goals:

- Viable elk populations in a healthy condition

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Maintain the elk range shown on the Elk and Moose map	1.1 Designate the elk range area shown on the Elk and Moose map as "ungulate winter range" under the *Forest and Range Practices Act*		Management objectives for elk are not expected to have an impact on the timber harvesting land base so no planning allowance has been allocated
	1.2 Consider available First Nations' knowledge of elk range in the designation		
2. Manage resource development and use activities within elk range (see map) by providing adequate forest cover and forage for elk.	2.1 Ensure that approximately 30 – 50% of the security and snow interception cover within the elk habitat shown on the on Elk and Moose map occurs within patches that are 10 hectares or greater		Provide fire maintained openings within interior Douglas fir that create temporary grasslands or open forest Elk habitat requirements are similar to those of mule deer – see mule deer section
	2.2 Maintain visual screening along main haul roads		
	2.3 Allow for the use of prescribed fire on the areas upslope of Lytton and upslope along Highway 1		
	2.4 Maintain natural ecosystems in the Siska Creek drainage including grasslands that are essential elk habitat		
3. Manage resource development and use activities within elk range by providing movement	3.1 Provide a mosaic of age classes within corridors as follows: • Maximum 30% removal with 3 metre green up for hiding cover within the corridors		High elevation summer elk habitats are: Mount Zakwaski/Cowhead Pass/Mount Hewitt Bostock and Mount Lytton/Kanaka

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
opportunities for elk between the two high elevation summer habitats as well as between summer habitats and the low elevation critical winter range habitats	• At least 30% of the stands must be greater than 16 metres in height at any onetime • Maximum opening length is 300 metres (one side). This does not apply when utilizing selective harvesting systems • Selective harvesting systems should retain at least 40% basal area and original tree species composition		Mountain Critical winter range habitats are the low elevation, west facing slopes between Lytton and the Mowhokan River
4. Limit impacts of road access and density on elk populations within their range (see Elk and Moose map)	4.1 Within elk habitat, minimize to the extent practical the amount of road accessible to 2 or 4-wheel drive vehicles		Roads open to public use within elk range are minimized
	4.2 Use the following directions to guide development, deactivation, rehabilitation, and regulated closures within elk range: • Check the seasonal access maps to identify any access management direction for public and industrial use		
5. Undertake elk conservation efforts in the community/Crown land interface area especially within critical winter range near Highway 1		Minimized elk mortalities No habitat loss near travel corridors	

4.2.2 Moose

The estimated population is between 200 and 300 animals with a consistent upward trend over time. Critical components of moose habitat are suitable forage, thermal shelter in both summer and winter, and limited human disturbance. Moose management focuses on winter and summer/reproductive ranges and moose management units established for high value sites (see map).

Issues:

- Reduction in the quality, abundance and distribution of essential habitat (e.g., forage, thermal cover, security cover) and impediments to movement (e.g., livestock fences).
- Increased access-related mortality from unregulated hunting, poaching, stress, inappropriate road locations, types and levels of use.

Goals:

- Increased distribution and abundance of moose

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Maintain winter range as shown on the Elk and Moose map	1.1 Designate the winter range areas shown on the Elk and Moose map as "ungulate winter range" under the *Forest and Range Practices Act*		Management objectives for moose are not expected to have an impact on the timber harvesting land base so no planning allowance has been allocated
	1.2 Consider available First Nations' knowledge, when available, of moose winter range into habitat information considered during map amendments		
2. Provide security and thermal cover and manage high value moose habitat through the establishment of moose management units (MMUs)	2.1 Establish MMUs within high value sites		High value habitat sites are shrub-dominated swamps, fens and carrs where willow is a dominant species and ungulate browsing is evident
	2.2 Where the high value habitats are isolated or in small groups, a larger buffer can be applied. Where MMUs occur in large groups or complexes, a smaller buffer can be applied		
3. Protect forage and shelter values within MMUs in moose winter range (see Elk and Moose map) and provide for early seral stages of shrubs	3.1 Up to 33% of the wetland/riparian edges in these areas may be harvested in a single pass		
	3.2 The maximum functional exposure along wetland/riparian areas should not exceed 200 m in width. No more than 1/3 may be clearcut in a single pass	At least 67% of the wetland/riparian edges are not harvested in a single pass	
	3.3 New clearcut blocks	Openings are less than	

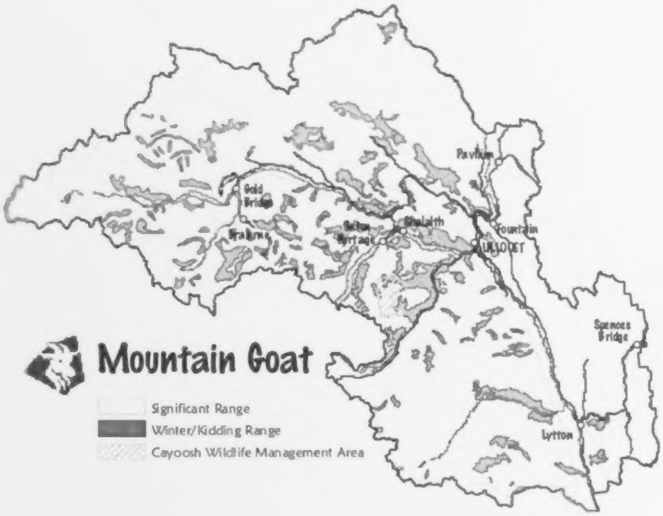
Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	adjacent to existing clearcuts or cutblocks without adequate visual security should not be harvested until a 4-metre green-up has been achieved on the adjacent, existing cutblocks	200 metres long At least 67% of the area has forests that are at least 4 metres tall	
4. Manage resource development and use activities within summer/reproductive range by protecting forage and shelter values and providing for early seral stages of shrubs (See summer/reproductive range on the Elk and Moose map)			
5. Within mapped moose winter ranges (see the Elk and Moose map) provide and maintain adequate browse of palatable species (e.g., willow, birch, aspen, red-osier dogwood) approaching a natural distribution	5.1 Design harvest patterns to maximize early seral forage opportunities in keeping with cover requirements and natural patch size distribution	Within moose winter range, livestock and forest management maintain or enhance key shrub or browse species (e.g., willow, birch, aspen, re-osier dogwood) approaching a natural distribution	
	5.2 Avoid the use of broadcast herbicide applications		
	5.3 Avoid forage species such as willow, birch, aspen, red-osier dogwood, where wherever possible when doing spot herbicide treatment		
	5.4 Avoid the conversion of forage dominant sites to conifer dominated sites by avoiding conifer planting or, at the very least, cluster plant only		
	5.5 Apply minimum stocking standards on wetter		

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
	(non-mesic) sites to allow for increased production of palatable browse species		
	5.6 Utilize site preparation and brush control methods that minimize impacts to moose forage. Scarification, if necessary, should only be done on planting lines to protect natural regenerating forage species		
6. Reduce forage competition between livestock and moose in mapped winter and summer/reproductive ranges (see Elk and Moose map)	6.1 Through range use plans, restrict grazing by domestic livestock to less than 20% removal of leaves and 10% removal of current year's growth of shoots and twigs		
7. Ensure the long-term maintenance of thermal and security cover within mapped summer/reproductive and winter ranges (see Elk and Moose map), and provide moose with access to cover in these ranges	7.1 Place wildlife tree patches proximal to key forage areas		
	7.2 Ensure wildlife tree patches are placed in quality thermal cover (usually spruce stands), where possible		
8. Manage resource development and use activities within their winter and summer/reproductive ranges by minimizing impacts of road access and density	8.1 Use the seasonal access maps to identify any access management direction for public and industrial use	Impacts from road access and road density are minimized	
	8.2 Locate main haul roads away from winter and summer/reproductive ranges		
	8.3 Branch and spur roads built within summer / reproduction sites should be deactivated or blocked to restrict 2 and 4-wheel drive road vehicle access		
	8.4 Maintain visual screening between roads and forage areas, or break up		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	line of sight from roads in moose winter range		
	8.5 Ensure effective visual cover around stand tending areas (e.g., areas that have not reached green-up)		
	8.6 Implement appropriate deactivation, rehabilitation, regulated closures and graduated access measures for new road developments within mapped moose winter and summer/reproductive ranges		
9. Allow unimpeded movement of moose within their winter and summer/reproductive ranges (see Elk and Moose map)	9.1 Replacement or new livestock fencing should not exceed 42 inches (1.07m) in height and should be a minimum of 18 inches above ground to allow young moose calves to pass over or under fences	Moose movement not impeded by fences	
	9.2 Use top rails on fences wherever moose traffic is high (e.g., where trails cross fences)		
	9.3 Use 39" fence (1.0m) on drift fence where cattle pressure is low and in valuable moose habitat		
10. Continue to gather knowledge and information of moose habitat, health and populations, including First Nations knowledge	10.1 Continue inventory work to determine population numbers and to refine habitat mapping (winter range and critical areas), as well as the key limiting factors on moose populations (e.g., habitat, poaching, predation, access, etc)	Improved information about moose habitat and populations	
	10.2 Explore opportunities to involve First Nations in wildlife studies and assessments		

4.2.3 Mountain Goat

Mountain goats favour steep, rocky and rugged areas for escape terrain, and generally do not forage more than 400 metres from it. They spend winters in timbered areas on steep, south- and west-facing slopes or on wind-blown ridges where forage is exposed. Summer maternity groups move to alpine ridges and basins above this winter range.


Pavilion
Gold Bridge
Bralorne
Seton Portage
Shalalth
Fountain
LILLOOET
Spences Bridge
Lytton
Mountain Goat
Significant Range
Winter/Kidding Range
Cayoosh Wildlife Management Area

For populations to remain viable, they need undisturbed birthing and rearing areas, undisturbed forage areas near escape terrain, and thermal and security cover. Management focuses on winter/kidding ranges (see map).

A wildlife management area will be designated in the Cayoosh Range (see map) to ensure sustainable management of local goat herds while providing continued opportunities for resource development and commercial use.

Issues:

- Reduction in the quality, abundance and distribution of essential habitat (e.g., forage, escape terrain, thermal and security cover).
- Disturbance and mortality due to industrial, tourism and recreational activities in winter/kidding ranges.

Goals:

- Viable and healthy mountain goat populations restored to, and maintained at, historical numbers

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Maintain mountain goat winter and kidding ranges shown on the Mountain Goat map	1.1 Designate the winter and kidding range shown on the Mountain Goat map as "ungulate winter range" under the *Forest and Range Practices Act*		Management objectives for mountain goat are not expected to have an impact on the timber harvesting land base so no planning allowance has been allocated
	1.2 Consider available First Nations' knowledge of winter and kidding ranges in the designation		

4.2.3 Mountain Goat

Mountain goats favour steep, rocky and rugged areas for escape terrain, and generally do not forage more than 400 metres from it. They spend winters in timbered areas on steep, south- and west-facing slopes or on wind-blown ridges where forage is exposed. Summer maternity groups move to alpine ridges and basins above this winter range.

For populations to remain viable, they need undisturbed birthing and rearing areas, undisturbed forage areas near escape terrain, and thermal and security cover. Management focuses on winter/kidding ranges (see map).

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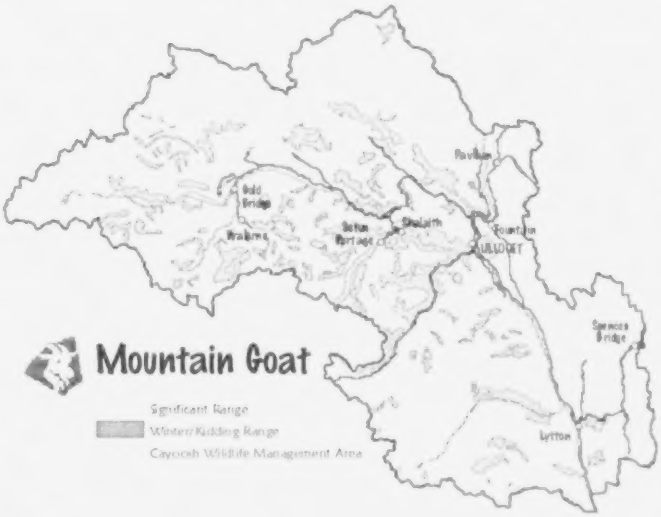

Mountain Goat
Significant Range
Winter/Kidding Range
Cayoosh Wildlife Management Area
Pavilion
Gold Bridge
Bralorne
Seton Portage
Shalalth
Fountain
LILLOOET
Spences Bridge
Lytton

Issues:

- Reduction in the quality, abundance and distribution of essential habitat (e.g., forage, escape terrain, thermal and security cover).
- Disturbance and mortality due to industrial, tourism and recreational activities in winter/kidding ranges.

Goals:

- Viable and healthy mountain goat populations restored to, and maintained at, historical numbers

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Maintain mountain goat winter and kidding ranges shown on the Mountain Goat map	1.1 Designate the winter and kidding range shown on the Mountain Goat map as "ungulate winter range" under the *Forest and Range Practices Act*		Management objectives for mountain goat are not expected to have an impact on the timber harvesting land base so no planning allowance has been allocated
	1.2 Consider available First Nations' knowledge of winter and kidding ranges in the designation		

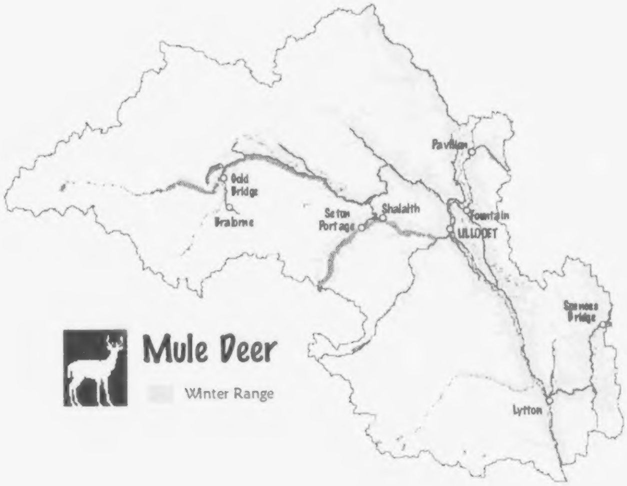
Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
2. Manage resource development and use activities within significant and winter/kidding range (see map) to provide forage, escape terrain, and thermal and security cover	2.1 Ensure that not more than 33% of the forested habitat within a 200 m buffer of escape terrain within winter/kidding range is in early seral (<40 years) over one rotation and at least 50% basal area of mature and old stems are retained at all times		Escape terrain is defined as areas with greater than or equal to 80% slope
	2.2 Clearcuts within winter and kidding ranges should not exceed 4 ha		
3. Manage resource development and use activities within winter/kidding range by reducing or eliminating disturbance and displacement of mountain goats	3.1 Avoid ground based, cable and helicopter logging activities within 500 metres of identified winter and kidding habitats from December 1 to June 30 unless prescribed for protection of other resource values (e.g. sensitive soils)	Disturbance or displacement is minimized within occupied winter/kidding ranges	
	3.2 Avoid regular and repeated industrial helicopter flights within a 2-km line-of-site buffer around goats within identified and suspected goat winter and kidding range from December 1 to June 30		
	3.3 Avoid regular and repeated industrial helicopter flights within a 2 km line-of-site buffer around observed summer maternity groups from June 1 to September 15		
	3.4 Where practical, all flights should fly as far away from identified and suspected goat winter/kidding and kidding ranges from December 1 to June 30		
	3.5 Provincial agencies issuing tenures on Crown land should make winter/kidding habitat mapping and summer maternity range information available to clients and user groups		
	3.6 Avoid blasting within 500 metres of identified winter and kidding habitats from December 1		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	to June 30		
4. Restrict disturbance or displacement of goats from recreational and tourism related human disturbance including both air and ground based mechanized forms of recreational access (e.g., cat skiing machines, snowmobiles, helicopter and fixed wing aircraft) within currently identified and suspected winter and kidding ranges (see Mountain Goat map). In no circumstances is use of current permanent helipads and common air transit routes near settlement areas (e.g., Lillooet, Lytton, Gold Bridge) and destination resorts (e.g., Tyaughton Lake) to be restricted	4.1 Avoid regular and repeated flights within a 2-km line-of-site buffer around goats within identified winter/kidding range from December 1 to June 30	Disturbance or displacement to summer maternity groups is minimized: regular and repeated aircraft flights within a 2 kilometre line-of-site buffer around observed groups are avoided between June 1 and September 15	
	4.2 Avoid regular and repeated flights within a 2-km line-of-site buffer around observed summer maternity groups from June 1 to September 15		
	4.3 Where practical, all flights should fly as far away as possible from identified and suspected goat winter and kidding range from December 1 to June 30		
	4.4 Discourage recreational and tourism activities in winter and kidding habitats that disturb or displace goats during their season of use (December 1 – June 30)		
	4.5 Provincial agencies issuing tenures on Crown land should make winter and kidding habitat mapping and summer maternity range information available to clients and user groups		
5. Manage resource development and use activities within identified winter/kidding ranges by minimizing impacts of road access and road densities	5.1 Use the seasonal access maps to identify any access management direction for public and industrial use	Road densities within occupied winder/kidding ranges are minimized	
	5.2 Wherever possible, avoid road construction within winter and kidding habitats		
	5.3 Where road construction is necessary, vehicular access (2 and 4-wheel drive road vehicles)		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	should be blocked as soon as possible after industrial activities, including planting, are completed. If required, the roads could be reopened during periods of silviculture activity		
6. Continue to gather knowledge and information of mountain goat habitat, winter and kidding ranges, health and populations, including First Nations' knowledge	6.1 Continue inventory work to improve the accuracy of current and historical population numbers and to identify habitat areas, particularly specific locations and seasons of use	Improved information about mountain goat habitat and populations	
	6.2 Explore opportunities to involve First Nations in wildlife studies and assessments, including traditional use studies		
	6.2 Assist First Nations in undertaking traditional use studies that might identify their traditional use of mountain goats		

4.2.4 Mule Deer

The current population is estimated at 8,000. Snow depth can limit mule deer movement, making winter range areas with low snow levels and adequate forage important for mule deer survival. Winter range (see map) is considered a limiting habitat factor, but others include habitat degradation, predation, unregulated harvest and disease.



Issues:

- Reduction in the quality and distribution of essential habitat including tree cover for snow interception and security, forage and unimpeded migration routes.
- Increased mortality risk from unregulated hunting, poaching, stress, motor vehicles, uncontrolled access and development within winter range.

Goals:

- Increased distribution and abundance of mule deer with improved quality and quantity of habitat

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Maintain mule deer winter range areas shown on the Mule Deer map	1.1 Designate the mule deer winter range capability areas shown on Mule Deer as "ungulate winter range" under the *Forest and Range Practices Act*	Mule deer winter range management achieved using the timber harvesting land base planning allowance of 6,000 hectares	
	1.2 Consider available First Nations' knowledge of mule deer winter range in the designation		
2. Ensure snow interception, thermal and security covers are well distributed over the mule deer winter capability range (see Mule Deer map)	2.1 WLAP through consultation with appropriate ministries will develop winter range planning cells of approximately 200 – 600 ha	Planning cells of approximately 200 to 600 hectares in size are established within winter range	Snow interception, thermal and security covers are important so that deer are able to avoid deep snowpacks, find food not yet buried in snow, moderate temperature and hide from predators.
	2.2 Crown closure less than class 5 (46%) and age class less than 8 are not considered suitable for snow interception Where practicable, utilize old stands with the highest crown closures		
3. Manage resource development and use activities by providing well distributed and accessible snow interception and security cover within winter range planning cells, particularly in areas with deeper snowpacks	3.1 Priority should be given to areas identified as higher value shelter (see Mule Deer map)	Adequate snow interception and security cover within winter range	Adequate snow interception cover is typically comprised of Douglas fir stands with a minimum age class 8 (140 years) with 46% or greater canopy closure Sample calculation: (33% +15%) ÷ (moderate snowpack ha ÷
	3.2 Where biodiversity objectives can be met, wildlife tree patches should give priority to Douglas fir, that are at least 140 years old with 46% or greater canopy closure		
	3.3 Within each cutblock, reserve a minimum of 5% of the basal area of the cutblock in the largest diameters of Douglas fir available, preferably distributed in clumps throughout the block		

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
	3.4 In areas of uneven aged forest management, at least 50% of wildlife tree retention requirements must be provided as patches (i.e. groupings/clusters) of trees, as opposed to retention of single wildlife trees		assessment unit). If moderate snowpack is less than 10% of the assessment unit, them the whole unit is managed to the low snowpack strategy percentage. The weighted average percentage in the moderate snowpack zone can never be less than 20% (the only exception being when the moderate is less than 10% of the assessment unit)
	3.5 Where possible maintain snow interception cover that is linked together, both within planning cells and between planning cells, to provide opportunities for movement throughout the winter range		
	3.6 In the moderate snowpack zone (IDFdk1, IDFdk2, IDFdk3, IDFunk, MS), maintain 33% of the forested area within the planning cell in stands that are suitable snow interception cover. This cover requirement should be emphasized in higher value shelter areas (see Mule Deer map)		
	3.7 In the shallow snowpack zone (PP, and IDFxh2), manage 15% of the forested area within the planning cell in stands that are suitable for snow interception cover. This cover requirement should be emphasized in higher value shelter areas (see Mule Deer map)		
	3.8 Where the moderate snowpack is linked directly to the low snowpack, modify the percent target for snow interception cover for the moderate to be the weighted average (by area) of the two		
	3.9 Block width will not be restricted, providing there is a good distribution of forage and cover in the winter range planning cell, i.e. well distributed, numerous patches of cover over the planning cell, as opposed to one or few, cover patches		
	3.10 Where there is not a good distribution of forage and cover		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	within a planning cell and where practicable, at least one dimension within a cutblock must be 200 metres or less		
	3.11 Reforestation should emulate harvested stands in species and distribution		
4. Manage resource development and use activities by limiting impacts from road access and road densities within winter range	4.1 Use the seasonal access maps to identify any access management direction for public and industrial use	Disturbance within winter range is minimized Open roads, and highway road kills, within winter range are minimized	
	4.2 On existing roads, minimize where practical, the amount of open road (i.e., two or four wheel drive passenger vehicle accessible) in mule deer winter range		
	4.3 Do not promote disruptive recreational activities on deer winter ranges (e.g., non-organized snowmobiling, extensive cross-country ski trails)		
	4.4 Educate public recreation groups about the effects of disturbance to over-wintering deer		
	4.5 Where possible, avoid maintaining open ploughed forestry roads through winter range from November to March		
5. Manage resource development and use activities by limiting the impacts of livestock grazing and overstory conifer competition on mule deer forage species	5.1 Through range use plans, restrict grazing by domestic livestock to less than 20% removal of leaves and 10% removal of current year's growth of shoots and twigs on shrubs	Within winter range, range use plans identify and manage desired plant communities to favour mule deer winter browse species	Provide for a shrub component of forage within mule deer winter range
	5.2 Range use plans in mule deer winter range areas will identify and manage for desired plant community that favour mule deer winter browse species		
	5.3 Re-vegetation of grasslands in permanent range within mule deer winter range will, wherever practicable, be done using available native species mixes		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	5.4 Where practical, utilize prescribed burns to reduce conifer density and enhance understory development within the drier ecosystems of the mule deer winter range		
	5.5 Where practical, utilize silvicultural treatments (e.g. juvenile spacing) that reduce conifer density and enhance understory development within the drier ecosystems of the mule deer winter range		
6.0 Allow unimpeded movement of mule deer within winter range area (see Mule Deer map)	6.1 Existing or new livestock fencing should not exceed 42 inches (1.07m) in height and should be a minimum of 18 inches above ground to allow young mule deer to pass over or under fences	Movement between winter and summer ranges is not impeded by fences	
	6.2 Avoid the alienation of Crown land that may disrupt deer movement within mapped movement corridors or that may reduce critical winter range	Minimized impacts from Crown land alienation in mule deer winter range	
	6.3 Educate private landowners to consider the need for deer movement within their land developments		
7. Minimize highway road kills of mule deer throughout the plan area	7.1 Identify site-specific areas where mule deer road kill is a significant issue (e.g., Laluwissen on Highway 12)	Open roads, and highway road kills, within winter range are minimized	
	7.2 Implement a system to track incidence of mule deer road kill to verify the significance of this issue within the plan area		
	7.3 Encourage the use of appropriate technology to reduce the incidence of road kill: including signs, animal whistles, roadside reflectors, and wildlife fencing where necessary to protect the animals and the driving public		
8. Continue to gather knowledge and information of	8.1 Continue inventory work to determine population numbers, movement corridors and habitat	Improved information about mule deer habitat and	

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
mule deer habitat, health and populations	areas, as well as the key limiting factors on mule deer populations (e.g., habitat, poaching, predation, etc.)	populations	
	8.2 Explore opportunities to involve First Nations in wildlife studies and assessments		

4.3 *Species at Risk*

4.3.1 General

"Species at risk" include red- or blue-listed plant or animal species. The area has at least ten red-listed and twenty-three blue-listed fish and wildlife species, as well as numerous red- and blue-listed plants and plant communities. Knowledge of the distribution, habitat requirements and methods for managing these species is limited and needs improvement.

The Identified Wildlife Management Strategy provides approaches for managing a number of species, including several with habitat within the plan area (tailed frogs, fisher, bull trout, bighorn sheep and grizzly bears). This plan supplements this direction, and provides information for white sturgeon and spotted owls.

Issues:

- Inadequate information on distribution, abundance, and habitat requirements.
- Loss of suitable habitat can lead to local extirpation.
- Access can put bull trout and white sturgeon at risk from over-fishing and poaching.

Goals:

- Healthy populations of species at risk with sufficient habitats across their natural ranges

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Increase knowledge and access to information for species at risk	1.1 On a priority basis, undertake inventory and research to determine presence, population numbers, habitat requirements, range, etc. of species at risk within the plan area. Place high priority on inventory of rare species, habitats and ecosystems within their potential distribution	Improved information about species at risk populations and habitat conditions	
	1.2 WLAP should provide		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	relevant information and mapping on species at risk to resource management and tenuring agencies		
	1.3 Incorporate existing knowledge and inventory information on species at risk in forest and land management activities including traditional use, existing and historic records from First Nations		
	1.4 Work with local bat conservation groups to identify and map sensitive bat habitats, including hibernacula, roost sites, and critical foraging habitats		
2. Retain sufficient quantity and quality of habitat to ensure the long term viability of species at risk across natural ranges	2.1 Continue efforts to build partnerships with government agencies, licensed tenure holders, and the public, encouraging stewardship near sensitive habitats	Sufficient quality and quantity of habitat for species at risk, consistent with the measures outlined in the Identified Wildlife Management Strategy, including establishment and management of wildlife habitat areas	
	2.2 Avoid damage or disturbance to site		
	2.3 Avoid permanent alienation or conversion of site		
	2.4 Implement mitigation measures where damage to habitat cannot be avoided		Mitigation measures should include, but not be limited to, measures to create alternative habitat area and reclamation of affected habitat following development.
	2.5 Consider the use of designations of Crown Land under the *Land Act* to ensure key grassland areas are not unnecessarily alienated or impacted. The types of areas that could be considered include, but are not limited to, rare ecosystems, key spring ranges, red and blue listed		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	species habitat, etc.		
	2.6 Incorporate management for species at risk into range use plans and grazing lease management plans		
	2.7 Restrict access developments that will result in increased mortality risks or displacement from critical habitats		
	2.8 Implement appropriate access management in areas where fisher, tailed frog and other species at risk are known to exist		
3. Manage resource development and use activities within identified fisher habitat maintain suitable forest and riparian habitat	3.1 Coordinate efforts to maintain stand structure and mature and old forest connectivity along riparian systems to benefit fisher	Sufficient quality and quantity of habitat for species at risk, consistent with the measures outlined in the Identified Wildlife Management Strategy, including provision of suitable habitat including old and mature forest structure and large cottonwoods for fisher	
	3.2 Coordinate riparian management efforts for fisher with those to protect and maintain fish, fish habitat and water resources		
	3.3 Coordinate management efforts for fisher with those for biodiversity, particularly placement of old growth management areas and wildlife tree patches (See the Forest Biodiversity section)		
	3.4 Retain pure cottonwood stands. In mixed wood stands retain all cottonwood trees greater than 50 cm diameter at breast height as wildlife trees. Also retain a distribution of smaller stems for future recruitment		

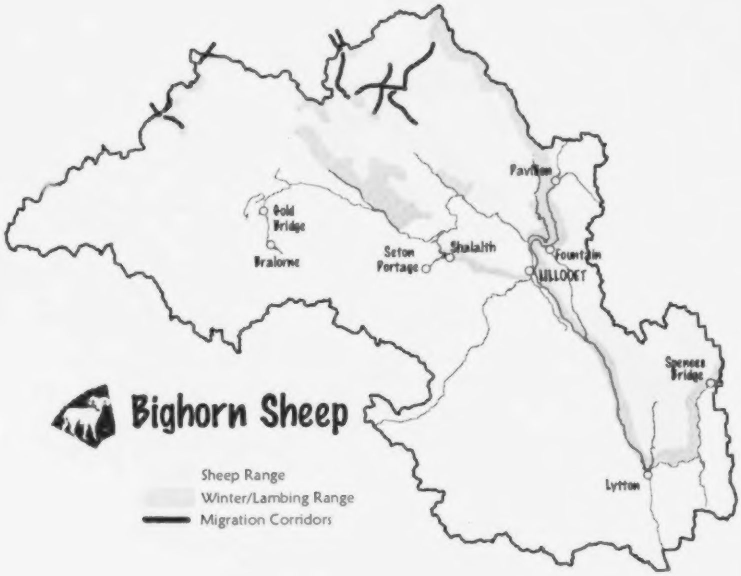
Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
4. Manage resource development and use activities in watersheds where tailed frogs are located to maintain suitable habitat, water quality and natural flow regimes	4.1 Coordinate riparian management efforts for tailed frog with those to protect and maintain fish, fish habitat and water resources (See the Fish and Riparian Habitat section)	Sufficient quality and quantity of habitat for species at risk, consistent with the measures outlined in the Identified Wildlife Management Strategy, including provision of suitable habitat, water quality and flow regimes for tailed frog	
	4.2 Prevent sediment from roads and stream crossings from entering watercourses where tailed frog habitat exists		
	4.3 For watersheds where tailed frogs are located, timber harvesting rates and scheduling should consider potential negative impacts on the flow regimes of streams with tailed frogs		
	4.4 Use the Identified Wildlife Management Strategy for tailed frog		
5. Manage resource development and use activities to maintain or enhance habitat for bull trout in known distribution areas (see Fish map).	5.1 Use stream inventories for bull trout and other 'best available information' during forest development planning. Where bull trout are suspected, forest development proponents should inventory stream reaches with gradients greater than the usual 20% default required by the *Forest Practices Code of BC Act*, to ensure bull trout habitat is not overlooked	Control of public access to known bull trout congregation areas	Consistent with the objectives for bull trout provided in current guidelines, retain functioning riparian areas around bull trout habitats.
	5.2 After the fisheries inventory has been completed, establish wildlife habitat areas under the Forest Practices Code for key bull trout staging/holding congregation and spawning areas. Follow the intent of the Identified Wildlife Management Strategy for bull trout (anadromous and non-anadromous) in the approval of operational plans in wildlife habitat areas		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	5.3 On a priority basis, complete appropriate watershed assessments for all stream systems supporting bull trout to assess previous forest development activities, and guide future activities, as described in the Identified Wildlife Management Strategy for bull trout		
	5.4 If identified, degraded bull trout habitat should be restored		
	5.5 Design and construct access to minimize impacts on bull trout habitat and populations as follows: Where bull trout are suspected in stream systems (see map in the Fish and Riparian Habitat section), incorporate existing inventories when planning access within 500 metres of these streams Identify appropriate access management tools where issues have been identified with respect to impacts on bull trout habitat Implement access management strategies for bull trout wildlife habitat areas Conduct road construction requiring in-stream works during the established in-stream work windows. In special circumstances, where fish or fish habitat is not put at risk, a variance to in-stream work windows can be approved by the Ministry of Water, Land and Air Protection and the Department of Fisheries and Oceans		
6. Improve	6.1 Baseline population and		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
information and knowledge about current populations of white sturgeon throughout the plan area	habitat inventories for sturgeon should be completed throughout the plan area		
	6.2 Sturgeon populations should continue to be monitored at least every 5 years		
	6.3 Consider available First Nations knowledge and traditional use information about white sturgeon		
7. Limit the creation of additional public access on Crown land near key white sturgeon and bull trout habitat	7.1 Agencies reviewing proposals that would increase access to the Fraser River and other rivers systems where key white sturgeon habitat is identified should consult with the Ministry of Water, Land and Air Protection	Control of public access to known bull trout and white sturgeon congregation areas	

4.3.2 Bighorn Sheep

Current populations are estimated at 1,000 California bighorn sheep and 300 Rocky Mountain bighorn sheep. To remain healthy and viable, bighorn sheep need productive preferred forage, adequate thermal and security cover and limited disturbance and impediments on key ranges (e.g., winter/lambing range, critical winter range, and migration corridors).


Bighorn Sheep
Sheep Range
Winter/Lambing Range
Migration Corridors
Pavilion
Gold Bridge
Bralorne
Seton Portage
Shalalth
Fountain
LILLOOET
Spences Bridge
Lytton

The focus of management is on migration corridors, lambing grounds and winter range. Management for mule deer winter range provides adequate bighorn habitat in forested areas.

Issues:

- Reduction in the quality, quantity and distribution of essential habitat including productive preferred forage, separate summer and winter habitats, and thermal and security cover.
- Increased mortality caused by disease, access related displacement and disruption from key ranges, and impediments to movement between habitats and through migration corridors.

Goals:

- Viable and healthy populations of bighorn sheep.

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
1. Maintain or enhance forage, thermal and security forest cover within bighorn sheep winter/lambing range areas shown on the Bighorn Sheep map	1.1 Designate the winter/lambing range areas shown on the Bighorn Sheep map as "ungulate winter range" under the *Forest and Range Practices Act*		
	1.2 Incorporate First Nations' knowledge of bighorn sheep winter range, lambing areas and migration corridors into habitat information considered during map amendments		
2. Improve forage opportunities for sheep throughout their presently identified winter/lambing ranges (see Bighorn Sheep map) and those winter ranges identified through future inventories	2.1 Manage livestock competition through directed management strategies in range use plans and identify poor condition, native bunchgrass range as areas to be improved		
	2.2 Develop and implement prescribed burn plans to remove competitive overstory vegetation, expose seeds to mineral soil and enhance understory development of beneficial shrubs (i.e. Saskatoon and willow species) in forested sites within sheep winter/lambing ranges		
	2.3 Consider available First Nations' knowledge of traditional use and prescribed burning when developing burn plans		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	2.4 Manage grasslands within permanent range to ensure a minimum 85% of the plant communities are in late seral stage or in potential natural communities		
3. Limit disturbance or displacement from road access and density on bighorn sheep populations within their winter/lambing range and known and possible migration corridors (See Bighorn Sheep map)	3.1 Avoid construction of new roads within mapped winter/lambing range, particularly on the benches along the Fraser River, and in the French Bar Creek, the upper Yalakom River and upper Noaxe Creek areas		
	3.2 If new roads cannot be located away from mapped winter/lambing range, restrict road construction during lambing periods (April 15 – June 30). Such roads should be put to bed as soon as possible after industrial use		
	3.3 Minimize road development that bisects mapped known and possible migration corridors		
	3.4 Schedule hauling and other concentrated industrial uses on roads bisecting mapped migration corridors outside peak migration periods (spring migration: May 20 – June 20: fall migration: August 31 – November 15)		
	3.5 Maintain visual screening adjacent to roads within migration corridors		Visual screening provides important cover from predators and hunters for sheep
	3.6 Implement appropriate deactivation, rehabilitation, regulated closures and graduated access measures for new road developments within mapped known and possible sheep migration corridors and winter/lambing ranges		

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
4. Minimize opportunities for the transmission of disease between domestic sheep and bighorn sheep	4.1 Do not issue Crown grazing tenures for domestic sheep grazing or domestic sheep grazing permits for silviculture purposes within 16 km of bighorn sheep habitat		Objective is aimed at protecting against transmission of disease to wild sheep, primarily lung worm. Domestic sheep owners typically have health regimes in place for management of domestic sheep health
5. Allow unimpeded movement of sheep through mapped winter/lambing ranges and known sheep migration corridors (See Bighorn Sheep map)	5.1 Do not permit replacement or new fencing across known sheep migration corridors or, if unavoidable, modify fences or fence to standards below: Replacement or new livestock fencing should not exceed 42 inches (1.07m) in height and should be a minimum of 18 inches above the ground Use top rails on fences wherever sheep traffic is high (e.g., where trails cross fences) Use 39" fence (1.0m) on drift fence where cattle pressure is low		
6. Avoid alienation of Crown land for purposes that may disrupt bighorn sheep movement within mapped migration corridors or alienation of Crown land that may reduce mapped (known) critical winter range and known lambing range (see Bighorn Sheep map)	6.1 Educate private landowners to consider the need for sheep movement in their applications for Crown land		Alienation of Crown land within mapped bighorn sheep migration corridors is minimized
	6.2 Where alienation cannot be avoided, identify and implement ways to minimize impacts to bighorn sheep migration or critical winter ranges		
7. Continue to gather knowledge and	7.1 Continue inventory work to determine population numbers		Improved information about

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
information of sheep habitat, health and populations, including First Nations knowledge	and habitat areas, as well as the key limiting factors on bighorn sheep populations (e.g., habitat, migration corridors, poaching, predation, etc.)		bighorn sheep habitat, migration corridors and populations
	7.2 Consider inventory studies in adjacent areas that involve herds that migrate into this plan area - (e.g., 'Churn Creek Bighorn Sheep Study' Williams Lake Forest District)		
	7.3 Explore opportunities to involve First Nations in bighorn sheep studies and assessments		

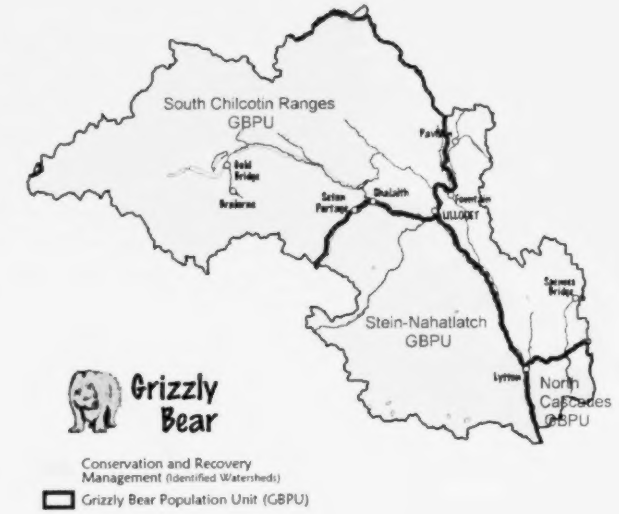
4.3.3 Grizzly Bear

Grizzly bear populations are estimated at less than 100, significantly below historical estimates. The plan area includes portions of three grizzly bear population units: North Cascades, Stein-Nahatlatch, and South Chilcotin Ranges (see map).

Each of these population units has been designated as 'threatened'. Grizzly bear hunting is not allowed. Recovery planning is underway to restore populations to viable levels and to improve local knowledge about bears and their habitats.

In general, grizzly bears require large areas that are relatively undisturbed, with a low risk of mortality or displacement, and an assured supply of critical habitats. Critical habitats are areas that are well suited for food, bedding or denning, especially where these are in short supply. They include avalanche tracks, meadows and wetlands that are rich in herbs, glacier lilies, white bark pine, skunk cabbage and berries. Salmon spawning areas are also important.

Most critical habitats are relatively small areas (1 to 5 hectares) but they contribute disproportionately to forage requirements.


South Chilcotin Ranges GBPU
Gold Bridge
Bralorne
Seton Portage
Shalalth
Pavilion
Fountain
LILLOOET
Spences Bridge
Stein-Nahatlatch GBPU
Lytton
North Cascades GBPU
Grizzly Bear
Conservation and Recovery Management (Identified Watersheds)
Grizzly Bear Population Unit (GBPU)

Issues:

- Increased risk of death or displacement due to interactions between humans and bears (e.g., defence of life and property killing; illegal hunting; road development near important grizzly habitat; death and displacement from traffic; fragmentation of home ranges; and separation of populations).

- Canopy closure in maturing forests can reduce the sustained supply of forage.
- Loss of critical grizzly bear habitats.
- Improper range management can degrade habitat and displace bears.
- Recreation and tourism use or development can affect a range of grizzly bear habitats and potentially cause displacement or mortality.

Goals:

- Viable, healthy grizzly bear populations living in suitable habitats across their natural ranges

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Increase knowledge and information available on grizzly bear populations and habitats to inform management decisions within grizzly bear population units (see map)	1.1 Design and implement inventory techniques to determine absolute abundance of grizzly bears, and to monitor population trends. Explore systematic seasonal aerial survey and/or DNA/hair collection programs to monitor population trends		
	1.2 Ministry of Water, Land and Air Protection should establish and implement a rigorous sighting record collection and recording system focused on monitoring the annual number of adult female grizzly bears with cubs-of-the-year in identified watersheds		
	1.3 Establish a grizzly bear mortality-monitoring program including detailed documentation of the circumstances and cause of death		
	1.4 Identify critical grizzly bear habitats (e.g., types, seasons of use, and ranking of importance), through inventories and ground verification		
	1.5 Use predictive ecosystem mapping to provide information on critical habitats		
2. Manage grizzly bear populations to the target levels specified (see Tables 1 and 2)	2.1 The Ministry of Water, Land and Air Protection should continue to monitor reports of grizzly bear mortality to ensure that bear mortality from all human causes: • does not exceed 4% of the estimated population;	Grizzly bear recovery plans developed and implemented Grizzly bear population unit targets achieved	Population targets will be updated as new inventories become available

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
	•less than 30% of this mortality is female; and •the total kill is not concentrated in one area		
	2.2 Initiate recovery planning		
	2.3 Consider access management direction in the Access and Transportation section, grizzly bear recovery planning, and future access planning when preparing operational resource development plans		
	2.4 Consider creating a legal hunt through recovery planning and plan implementation		
	2.5 Evaluate the effectiveness of the Lillooet LRMP grizzly objectives, in terms of achieving recovery, by establishing a bear population monitoring program		
3. Increase public awareness about grizzly bear behaviour and methods to avoid bear/human conflicts and bear mortality	3.1 Seek a higher level of public education, deterrence and enforcement of regulations and road closures	Grizzly bear mortality due to human interactions decreased	
	3.2 Implement a Wilderness Watch program (forest users reporting inappropriate activities to conservation officers) to support the conservation officer service		
	3.3 Implement a warden/guardian program to support the conservation officer service		
4 Manage resource development and use activities in identified watersheds (see map) to recover and sustain viable, healthy grizzly bear populations and habitats by minimizing the adverse impacts of	4.1 Attempt to overlap grizzly bear habitat needs with other compatible interests (e.g., riparian areas; old growth management areas) wherever possible to help achieve recovery without unduly restricting development	Effective management of public access achieved (see Access and Transportation section)	Management benefits grizzly bears by reducing displacement and the risk of mortality (e.g., due to defence of life and property or poaching.) Access for tenure holders will be maintained.
	4.2 Concentrate areas of timber harvesting to the greatest extent practicable to minimize open road access using methods such as aggregated cut blocks and other		

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
access	access management strategies		Roving security areas are approximately 10 square kilometres in size and are expected to be in place for no less than 20 years to limit disturbance to grizzly bears. They are intended to be non-motorized areas that are not open to public motor vehicle use. Industrial motorized use is permitted, subject to conditions (e.g., spring closures). Ministry of Water, Land and Air Protection, in cooperation with Ministry of Forests, Ministry of Energy and Mines, Land and Water BC and licensees, will identify the size and location of roving security areas. Effective access control means mitigating the effects of motorized access. See the Access and Transportation section for direction on access management. Operational plans will identify the specific control measures needed (e.g., seasonal road
	4.3 Provide effective access controls where necessary to achieve roving security areas on road networks within identified watersheds. Where access management fails to achieve roving security areas, minimize open road access and reduce overall road density.		
	4.4 Seed new roadsides and landings with low palatability species (remove orchard grass, red clover and alfalfa) where appropriate		
	4.5 Use the seasonal access maps to identify access management direction for public and industrial use		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
			closures, tank traps, deconstruction of roads, removing bridges,).
5. Within identified watersheds, stabilize landscape-level food supply in specific ecosystems	5.1 Maintain naturally occurring non-forested features (avalanche tracks, non-productive brush sites, berry sites) in the non-contributing landbase	Food supply stabilized through replanting or restocking of key areas to promote forage or berry production	
	5.2 Where possible, incorporate prime berry producing sites into wildlife tree patches, provided they have appropriate characteristics		
	5.3 Maintain grizzly bear forage by managing to minimum stocking standards as targets on selected ecosystems, and carrying out variable inter-tree spacing and/or cluster planting		
	5.4 Consider designating not satisfactorily restocked areas as grizzly bear forage areas and removing them from the timber harvesting landbase		
	5.5 In important berry producing areas, minimize the adverse impacts of site preparation and vegetation management (e.g., brushing and weeding) by targeting only the direct competitors with individual crop trees in these areas		
	5.6 Consider grizzly bear foraging needs in the management of coarse woody debris by retaining larger pieces within the limits of current provincial policy		
	5.7 Where possible, timber harvesting should occur on a snowpack that would buffer disturbance to Vaccinium species (huckleberries and grouse berries). Where timber harvesting is not done on snowpack, make reasonable		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	efforts to minimize disturbance to Vaccinium species		
6. Maintain the suitability of critical grizzly bear habitats, and ensure these habitats have adequate security and thermal cover associated with them	6.1 Avoid or mitigate activity/development (e.g., road building, timber harvesting, site preparation) that negatively alters or reduces the extent of the vegetative community of critical habitats	Grizzly bear management achieved using the timber harvesting land base planning allowance of 8,000 hectares	Critical grizzly bear habitats are areas with high forage, bedding or proven denning value for grizzly bears, especially where these habitats are in short supply
	6.2 Maintain a minimum of a 50 m conifer forested buffer or equivalent forested cover adjacent to critical habitats for security and thermal cover. Buffer non-forested critical habitats with natural configurations of adjacent forest cover		Critical habitat will normally be deferred from forest development, including road construction and timber harvesting. However, managers and planners must determine if there are: 1) historic rights and tenures of human use on that area; or 2) if there are no practicable alternatives to development. If existing human use takes precedent or there are no practicable alternatives, then the prescriptions should recognize the inherent critical habitat status through application of appropriate mitigation and bear/human conflict prevention measures
	6.3 Where forestry roads cross avalanche chutes, and risk of downslope movement exists, recontour roads after timber harvesting to prevent loss of important grizzly bear habitat		
	6.4 Where possible, place critical habitats into constrained areas (e.g., old growth management areas)		
	6.5 Tourism operators should avoid critical grizzly bear habitat when locating new uses, camps, trails or grazing areas		
	6.6 For mineral exploration, as much as practicable, avoid constructing access roads or blasting in occupied critical habitats in the spring		
7. Manage range	7.1 Consult with the Ministry of		Reduce the

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
use and grizzly bear interactions that can lead to livestock losses, bear mortality, displacement, habitat alteration and degradation	Water, Land and Air Protection before expansion or issuance of new cattle and sheep range tenures or before an increase in animal unit months within identified watersheds. Tenure-specific management strategies may be required to address bear and cattle/sheep conflicts		conflicts that lead to mortality losses of domestic livestock and bears, and displacement and habitat loss of grizzly bears
	7.2 Include management strategies in range use plans that will minimize conflicts, habitat displacement, alteration, degradation and loss		Manage range tenures to reduce impacts. Risk would be determined by factors such as known occurrences, suitability of habitat, and season of cattle grazing
	7.3 Manage for grizzly bear forage by setting in range use plans, desired plant communities that favour grizzly bear forage within critical habitats		
	7.4 Avoid cattle/sheep use of identified critical habitats, especially during the period when grizzly bear use is expected in these habitats, in existing tenures		Not intended to extinguish licensed operators; instead, manage identified impacts (including areas where potential problems/impacts have been identified) from livestock This recognizes the difference in severity between grizzly bear interactions with cows and sheep versus those with horses
8. Implement appropriate measures to reduce bear-human interactions	8.1 Reduce the availability of non-natural attractants such as garbage to grizzly bears by bear-proofing garbage cans, dumpsters and landfills	Grizzly bear mortality due to human interactions decreased	
	8.2 Require bear-proofing of remote commercial, industrial or research camps		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
9. Minimize negative interactions between grizzly bears and recreational activities in identified watersheds (see map)	9.1 Avoid trail or campsite development in or near critical habitats to minimize impacts and mortality risks to bears	Grizzly bear mortality due to human interactions decreased	
	9.2 Conduct bear hazard assessments on existing high use trails (more than 10 parties per week) and campgrounds and consider modifications where hazards are moderate or high		
	9.3 Where existing high use trails cross avalanche chutes (or other critical habitats), or where trail locations are proposed in or near critical habitats, relocate trail locations wherever possible at least 250 metres away from critical habitats		
	9.4 When improving existing trails or considering new trails, and where relocation is not a practicable option, maintain visual screening between high use trails and critical habitats		
	9.5 Consider seasonal trail closures to ensure human safety and minimize bear/human conflicts		
	9.6 Utilize public education and signage to minimize adverse bear human conflicts along high use trails in critical habitats		
10. Manage recreation and tourism developments to minimize bear/human conflicts and limit impacts on grizzly bear populations and habitat	10.1 Consider potential grizzly bear/human conflicts and options for mitigation prior to authorizing new commercial recreation activities within grizzly bear identified watersheds. See the Wildlife-Commercial Recreation guidelines on the Ministry of Water, Land and Air Protection's website		The scope, detail, and extent of planning and monitoring will depend on the scale and location of the proposal Consistent with existing legislation, large-scale recreation and tourism developments will be examined
	10.2 Avoid fee simple sales of Crown land on or immediately adjacent to critical grizzly bear habitat within identified watersheds		
	10.3 Refer to relevant memoranda		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	of understanding or agreements respecting grizzly bears and management of their habitats		through the environmental assessment process This includes examining cumulative impacts during the planning, review and monitoring of new commercial and non-commercial recreation applications, as well as public recreation development (e.g., Forest Service recreation sites, park improvements) in identified watersheds (see map)

Table 1: **Current and Target Grizzly Bear Populations within Lillooet LRMP**

Grizzly bear population unit	Estimated population	
	Current	Target
North Cascades	4	6
South Chilcotin Ranges	55	110
Stein-Nahatlatch	33	66
Total	**92**	**182**

Notes:

- Both current and target bear populations are estimates based on the best available information. Either number may change as new information comes forward during recovery planning.
- Population numbers refer only to those portions of the grizzly bear population unit within the plan area.
- Target populations are based on an assessment of the habitat capability for each population unit.

Table 2 - Current and Target Effectiveness Estimates for the Prioritized Identified Watersheds
Note: Table 2 numbers were derived from the current and target population estimates in Table 1. The numbers for each grizzly bear population unit were divided among the 19 identified watersheds (hence, the decimal points for the numbers of bears). Identified watersheds are ranked in order of priority of application of objectives and strategies. The targets below were developed without consideration for land uses. The targets may require adjustment during recovery planning.

Identified Watershed	Number of grizzly bears	
	Current	*Target
0 – Remainder of GBPU	5.2	17.8
1 – Texas	2.3	6.2
2 – Spruce	4.3	5.5
3 – Kwoiek	4.6	10.5
4 – Siska	3.6	5.6
5 – Yalakom	5.8	13.5
6 – Gun	4.5	7.1
7 - Cadwallader	3.4	6.4
8 – Hurley	4.9	8.7
9 – Cayoosh	3.1	6.5
10 – Bridge	7.4	13.4
11 – Duffey	4.1	7.4
12 - McGillivray	4.5	8.3
13 - S. Carpenter	3.5	8.0
14 - Lost Valley	5.1	10.2
15 - N. Carpenter	4.8	10.9
16 – Mud	3.2	6.2
17 – Stein	13.4	21.9
18 - French Bar	2.5	4.6
19 – Watson Bar	1.6	3.0
Total	**91.9**	**181.6**

• Target is 75% of the mid-point of capability range for each Identified Watershed.

Table 3 - Stocking standard guidelines on forage/berry producing site series

Intent: Applies to all applicable tree species excepting deciduous species.

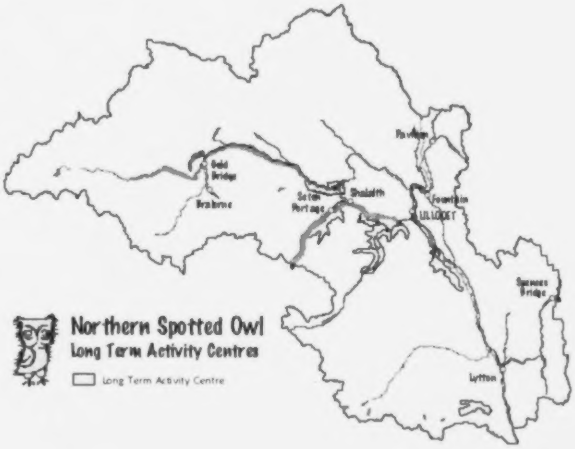
BEC Unit	Site Series	Current Target	Current Minimum	Proposed Target Crop Trees	Proposed Minimum Crop Trees	Proposed Maximum Total	Comments
CWHds1	06	900	500	600	400	700	
CWHds1	07	900	500	600	400	700	
CWHds1	08	900	500	500	200	600	Floodplain
CWHds1	09	900	500	500	200	600	Floodplain
CWHds1	12	800	400	400	200	500	Skunk cabbage
CWHms1	05	900	500	600	400	700	
CWHms1	06	900	500	600	400	700	
CWHms1	07	900	500	500	200	600	Floodplain
CWHms1	08	900	500	500	200	600	Floodplain
CWHms1	11	800	400	400	200	500	Skunk cabbage
IDFdk1	06	1000	500	500	300	600	
IDFdk2	07	1000	500	500	300	600	
IDFww	05	1000	500	500	300	600	
IDFww	06	1000	500	500	300	600	
IDFww	07	1000	500	400	200	500	Skunk cabbage
IDFww	08	900	500	600	400	700	
IDFww	09	900	500	600	400	700	
ESSFdc2	01	1200	700	600	400	700	
ESSFdc2	05	1000	500	500	300	600	
ESSFdc2	06	1200	700	600	400	700	
ESSFdc2	08	1000	500	500	300	600	

BEC Unit	Site Series	Current Target	Current Minimum	Proposed Target Crop Trees	Proposed Minimum Crop Trees	Proposed Maximum Total	Comments
ESSFdv	01	1200	700	600	400	700	
ESSFdv	04	1000	500	500	300	600	
ESSFdv	06	1000	500	500	300	600	
ESSFmw	01	1200	700	600	400	700	
ESSFmw	04	1200	700	600	400	700	
ESSFmw	05	1200	700	600	400	700	
ESSFmw	06	1200	700	600	400	700	
ESSFmw	07	1000	500	500	300	600	
ESSFmw	08	1000	500	500	300	600	
ESSFxc	06	1200	700	600	400	700	
ESSFxv	06	1200	700	600	400	700	
ESSFxv	07	1200	700	600	400	700	
ESSFxv	08	1000	500	500	300	600	
ESSFxv	09	1000	500	500	300	600	
MSdc	05	1200	700	600	400	700	
MSdc	06	1200	700	600	400	700	
MSdc	07	1200	700	600	400	700	
MSdc	08	1000	500	500	300	600	

4.3.4 Northern Spotted Owl

The Northern Spotted Owl has been on the province's red list since 1989 and is a candidate for endangered status under the BC *Wildlife Act*. Spotted owls require contiguous areas of older aged forests for foraging, roosting and nesting. Lillooet appears to be the northern edge of their range. Inventories over the past six years have confirmed three spotted owl nesting sites and several other areas with at least single birds.

Forestry activities in spotted owl habitat are guided by a *Memorandum of Understanding* signed in November 2003 between the main forest licensee and provincial regulatory agencies and the *Spotted Owl Operational Plan* approved in April 2004.



Issues:

- Current resource development planning does not address habitat requirements for spotted owls.
- There are concerns about whether Coastal harvesting guidelines for spotted owls are appropriate for local forests.

Goals:

- A stable northern spotted owl population with well-distributed, suitable habitat.
- Manage resource development and use activities to provide sufficient quantities of suitable habitat to sustain spotted owls over their natural range.

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1 Manage resource development and use activities to provide sufficient quantities of suitable habitat to sustain spotted owls over their natural range.	1.1 Incorporate the latest inventory information in the management plan	Interim management of long-term activity centres according to the *Memorandum of Understanding* and Spotted Owl Operational Plan started by 2004 Spotted owl recovery plans completed and implemented Spotted owl populations maintained Spotted owl management achieved using the interim timber harvesting land base planning allowance of 5,000 hectares	The goal of this management plan is to develop effective, science-based management for the conservation of owls while providing opportunities for economic development (logging, mining, tourism, ranching, etc.) Resource management plans should be consistent with direction provided by government-approved plans (e.g., the 2003 *Memorandum of Understanding; Spotted Owl Operational Plan; Spotted Owl Recovery Strategy; Spotted Owl Recovery Action Plan; Spotted Owl Management Plan*) Resource management plans should be adapted to local forest conditions In long-term activity centres, as defined by the 2003 *Memorandum of Understanding*, suitable habitat conditions exist where: • 67% of the forested land has forests that are at least 100 years old
	1.2 Apply the best scientific information available to develop a plan suited to the forest types of this area		
	1.3 Define“ viable population” in the management plan		
	1.4 Develop strategies to mitigate adverse effects of development on spotted owl nesting sites, roosting sites, forage areas and home ranges		
	1.5 Encourage participation of timber and mineral tenure holders, industry representatives, and the ministries of Energy and Mines and Forests, in order to ensure the management plan addresses industrial interests		
	1.6 The Ministry of Water, Land and Air Protection should provide habitat mapping in a timely manner to forest licensees, affected mineral tenure holders, and the ministries of Forests, Energy and Mines, and Sustainable Resource Management		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
			• confirmed nest sites are surrounded by timber harvesting reserves of sufficient size
2. Conserve suitable habitat within long-term activity centres (see map)	2.1 WLAP should provide spotted owl inventory findings to forest resource managers for incorporation into forest stewardship plans	Minimize disturbance to confirmed nests or roosting sites by mechanized industrial, commercial, and recreational activities, when the sites are most likely to be occupied (March to September) Disturbance of occupied nests or roosting sites avoided	These strategies are intended to apply to long term activity centres at least until the spotted owl management plan is developed and implemented. Some aspects (e.g., timber reserves) may be incorporated into the management plan and continue indefinitely With respect to forest development activities in confirmed spotted owl areas, the intent is to conserve viable habitat for nesting pairs while providing opportunities for harvesting Impacts to forest development activities are subject to timber harvesting land base planning allowance for spotted owls (see Table 1 in the Timber and Silviculture section) With respect to mineral activities in long term activity areas, the intent is to avoid impacts to documented nesting or roosting sites, while allowing exploration and development The Copper Creek activity centre overlaps a
	2.2 Boundaries of long term activity areas should be refined to include the latest available field information		
	2.3 Maintain 67% of suitable forested land in each long term activity centre has forests that are at least 100 years old		
	2.4 Place timber harvesting reserves around all confirmed nests. Reserves should be of sufficient size		
	2.5 Until the spotted owl management plan is prepared, mineral activities in long-term activity centres will continue to be managed through standard mining regulations		
	2.6 Where a timber harvesting reserve overlaps a mineral tenure, regulatory agencies (WLAP, MEM, MOF) should work with the tenure holder to develop practical steps to conserve nesting or roosting sites during mineral exploration and development activities		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
			large block of mineral claims. Management for owls should take into consideration the legal rights and obligations of mineral tenure holders
3. Integrate spotted owl management with management for other environmental resources (e.g., old growth management areas)	3.1 When placing old growth management areas consider overlaps on owl habitat		
	3.2 Wherever possible, overlap suitable spotted owl habitat with other compatible interests		
4. Increase knowledge and information available on spotted owl populations and habitats	4.1 Complete population inventories with the focus on higher priority areas. Highest priority areas for inventories should be where forest development is imminent	Improved information about spotted owl habitat and populations	
5. Minimize disturbance to confirmed nests or roosting sites by mechanized industrial, commercial, and recreational activities, when the sites are most likely to be occupied (March to September)		Disturbance of occupied nests or roosting sites avoided.	
6. Maintain connectivity and dispersal habitats between long-term activity centres			

4.4 *Forest Biodiversity and Grassland Ecosystems*

Resource management can be used to sustain natural processes and conditions in forested and grassland areas.

A range of wildlife and plant species benefit from conserving representative amounts of old growth forests and imitating natural patterns of disturbance.

4.4.1 Biodiversity in Forested Areas

The conservation of biodiversity depends on providing a range of forest conditions at a variety of scales:

- at the **regional** scale, through protected areas (see Section 4.5);
- at the **watershed** or **landscape** scale, through a mosaic of forests with differing structures and ages (seral stages); and
- at the **cutblock** or **stand** scale, by retaining important ecosystem features such as wildlife tree patches and coarse woody debris.

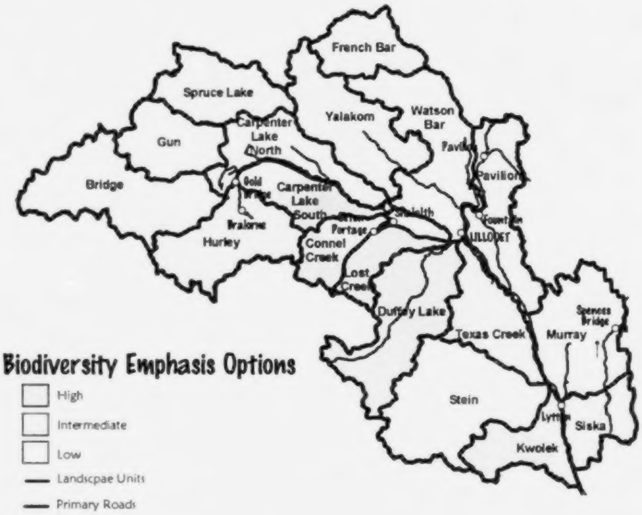
At the landscape or watershed level, the desired seral stage distribution depends on the types of ecosystems present and the biodiversity emphasis that is assigned to the landscape (see map).

Biodiversity emphasis options are based on the presence of species at risk, rare forest ecosystems, and the history of industrial development.

An important way of conserving biodiversity is to identify and maintain old growth management areas. These areas provide food and shelter for species that depend on old forests.

Issues:

- Current policy on old growth management will leave out some important forest types, but protecting these forests could reduce the amount of harvestable timber.
- Biodiversity and native species can be lost by forest harvesting practices that do not resemble natural disturbance patterns (e.g., fire, pests, and landslides).
- The loss of important ecosystem features at the stand scale (e.g., coarse woody debris and wildlife trees) can reduce species diversity.


French Bar
Spruce Lake
Yalakom
Watson Bar
Carpenter Lake North
Gun
Pavilion
Bridge
Gold Bridge
Carpenter Lake South
Shalalth
Portage
Bralorne
Hurley
Connel Creek
Lost Creek
Lillooet
Fountain
Duffey Lake
Texas Creek
Murray
Spences Bridge
Stein
Lytton
Siska
Kwoiek
Biodiversity Emphasis Options
☐ High
☐ Intermediate
☐ Low
— Landscpae Units
— Primary Roads

Goals:

- Forest and grassland biodiversity is sustained at all scales over space and time

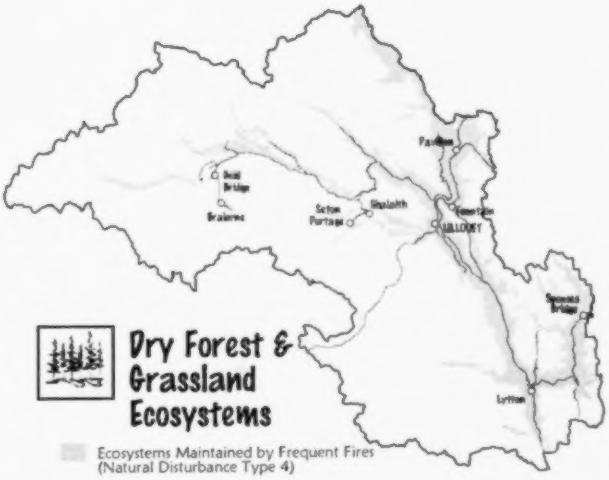
Objectives	Management Direction/Strategy	Measures of Success/Targets	Intent
Landscape Level Objectives			
1. Provide for landscape level biodiversity within landscape units using the assigned biodiversity emphasis options (see map)	1.1 Achieve old seral targets within biodiversity emphasis options consistent with current policies (e.g., *Landscape Unit Planning Guide*)	Provincial and forest district policies achieved	
2. Select old growth management areas to meet old targets and ecosystem representation while maximizing benefits for multiple resources	2.1 Use ecological and biological criteria when selecting old growth management areas. When ecological and biological values are equal between candidate old growth management areas, consider social and economic criteria developed through communications with First Nations and other communities.	Old growth management areas selected to meet targets and ecological representation by 2006	Incorporate other old forest attributes or wildlife values associated with old and mature forests to identify alternative old growth management areas
	2.2 Use the following old growth management area placement and recruitment priorities in forested lands, in order to minimize timber harvesting land base impacts: • Non-contributing land base (e.g., non-timber harvesting land base; parks; netdowns in the timber supply review) or areas removed from the timber harvesting land base through planning allowance allocations (see Table 1 in the Timber and Silviculture section). • Partially constrained timber harvesting land base (e.g., retention visuals, wildlife winter range, selection harvesting areas). Also, look for opportunities to incorporate spotted owl habitat management during the placement and recruitment of old growth management areas. • Unconstrained timber harvesting land base		
	2.3 Incorporate information about		

Objectives	**Management Direction/Strategy**	**Measures of Success/Targets**	**Intent**
	First Nations ethno-botanical / zoological resources and traditional land use and practices in old growth management area placement and recruitment decisions		
	2.4 In the Yalakom Local Resource Use Plan area, the mapped 'developed climax sites' should be considered as old growth management area candidates		
	2.5 In the Cayoosh, Van Horlick, Blowdown and Gott Creek watersheds, priority for old growth management area placement should be areas with old growth dependent species and rare coastal western hemlock stands		
	2.6 Where practical, avoid placing old growth management areas where they would impact mineral values, in particular known deposits and/or tenures		
	2.7 Evaluate the initial old growth management area selection to determine if the identified old growth management areas are a representative sample of each variant. Based on this information, MSRM may revise the initial old growth management area selection to improve representation		
	2.8 Provide opportunities for First Nations, stakeholders and agencies to comment on the recommended old growth management areas		
3. Manage cut and leave patterns, notably in larger cutblocks, to mimic the scale and patterns of natural disturbances so that known and	3.1 During the basic biodiversity phase of landscape unit planning, identify opportunities for larger blocks and encourage operational policies, procedures and practices		Harvest patterns consistent with natural disturbance patterns Cut and leave patterns allow for wildlife movement or connectivity along corridors
	3.2 Where there is a shortfall of larger sized patches within a landscape unit, aggregate existing cutblocks		

Objectives	Management Direction/Strategy	Measures of Success/Targets	Intent
predicted wildlife movement corridors retain appropriate cover over rotations and habitat fragmentation is minimized	3.3 Use the appropriate patch size distribution tables in the *Landscape Unit Planning Guide*		Habitat continuity
Stand Level Objectives			
1. Manage timber harvesting to maintain forest biodiversity at the stand level by retaining wildlife tree patches in harvested areas, historic distribution and representation of tree species and coarse woody debris	1.1 Avoid extensive conversions from climax to early successional species, or deciduous to conifer	Wildlife tree patches left in harvested areas Distribution and representation patterns of tree species	
	1.2 Establish wildlife tree patches as directed in the *Landscape Unit Planning Guide*		

4.4.2 Biodiversity in Dry Forest and Grasslands

Grasslands (NDT4a) and dry open forests (NDT4b) have a high percentage of rare, threatened, sensitive or vulnerable wildlife, plants and plant communities. Frequent, low-intensity fires have played an important role in maintaining some dry forests and grasslands (see map). Continuing the role of fire within these dry ecosystems is important to maintaining their biodiversity.


Dry Forest & Grassland Ecosystems
▨ Ecosystems Maintained by Frequent Fires (Natural Disturbance Type 4)
Gold Bridge
Bralorne
Seton Portage
Shalalth
Pavilion
Fountain
LILLOOET
Spences Bridge
Lytton

Issues:

- Conversion of grasslands (NDT4a) to forests reduces their productivity and diversity, and habitat for wildlife and species at risk.

Objectives	Management Direction/Strategy	Measures of Success/Targets	Intent
predicted wildlife movement corridors retain appropriate cover over rotations and habitat fragmentation is minimized	3.3 Use the appropriate patch size distribution tables in the *Landscape Unit Planning Guide*		Habitat continuity
Stand Level Objectives			
1. Manage timber harvesting to maintain forest biodiversity at the stand level by retaining wildlife tree patches in harvested areas, historic distribution and representation of tree species and coarse woody debris	1.1 Avoid extensive conversions from climax to early successional species, or deciduous to conifer	Wildlife tree patches left in harvested areas	
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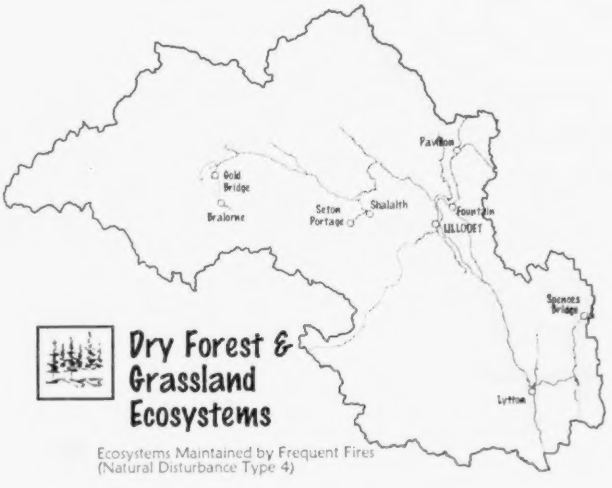
Pavilion
Gold Bridge
Bralorne
Seton Portage
Shalalth
Fountain
LILLOOET
Spences Bridge
Lytton
Dry Forest & Grassland Ecosystems
Ecosystems Maintained by Frequent Fires
(Natural Disturbance Type 4)

Issues:

- Conversion of grasslands (NDT4a) to forests reduces their productivity and diversity, and habitat for wildlife and species at risk.

- Open dry forests (NDT4b), dominated by old growth, have changed to dense forest stands. This results in greater impacts to species at risk and biodiversity, poorer forage and timber production, and greater risk of catastrophic wildfire.
- Unregulated access can disturb and degrade grasslands and dry forests and increase risks to wildlife (including species at risk).
- Key problem areas are not identified or appropriately managed.
- Inadequate knowledge of fire-maintained ecosystems.

Goals:

- Healthy, functioning fire-maintained ecosystems

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
1. Manage grazing, harvesting, silviculture techniques and burning activities to maintain or enhance the natural structure, function, health and productivity of dry forests and grasslands (see map)	1.1 Use silviculture and burning activities to reduce conifer encroachment and improve grassland productivity in NDT4a grasslands	Healthy grasslands distributed across historical ranges	
	1.2 Manage grazing prior to burning to allow the build up of fine fuel. Allow for adequate re-growth of grasses and forbs after burning	Grazing and fires support natural distributions of grasslands and dry forests	
	1.3 Define realistic and attainable desired plant communities to reflect the desired seral stage distribution	Dry forests with natural stand structure conditions	
	1.4 Develop and implement management prescriptions in range use plans to ensure that rare plants, rare plant communities and habitats for wildlife species at risk persist across their natural range	Improved wildlife habitat, enhanced forage productivity for livestock and wildlife use, improved forest health and productivity, and increased biodiversity and connectivity	
	1.5 Manage silviculture and fire activities to reduce ingrowth and enhance the understorey layers in open forested ecosystems (NDT4b)		Classical NDT4 attributes are: large-diameter, widely-spaced trees, a well developed grass/shrub understorey, and mosaics of thickets and openings Silviculture activities may include, , for example, maximum and minimum

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
			stocking standards, regeneration delay, stand density and species selection
	1.6 Encourage a variety of silviculture treatments (with a preference for mechanical treatment where this is beneficial to wildlife & livestock) where it is impractical to burn, or prior to burning in forested sites		
	1.7 Use cluster planting to meet stocking standards and allow plant succession to progress naturally in non-planted openings (voids)		
	1.8 In open forests, manage stand structures by site series to best imitate classical NDT4 stand structures		Develop and implement site series specific prescriptions to achieve desired stand structure (incorporating recommendations of the Kamloops Forest Region NDT4 Committee). Operational forestry plans should provide a range of opening (cutblock) sizes. Leave coarse woody debris where it would normally occur (i.e., in wet sites and very dry fireproof sites). Leave coarse woody debris where previous harvests have removed snag components. Within NDT4b

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
			sites, maintain 10 to15 tall, large diameter snags per 10 hectare area where they exist and create where they do not. Ensure there is more emphasis on snag retention in dry site series (02, 03, and 04). Utilize logging to open up stands
	1.9 Explore and encourage First Nation research initiatives to re-introduce burning practices back into traditional use areas		
	1.10 Consider available First Nations' knowledge of traditional use and prescribed burning when developing burn plans		
	1.11 Implement management prescriptions that include management for fire dependent species and ethno-botanical purposes		
	1.12 Consult with First Nations during the development and implementation of district burn plans within their traditional use areas		
2. Manage mechanized and motorized access in grassland areas (NDT4a) and dry forests (NDT4b) to minimize disturbance and degradation. (Also see the Access section)	2.1 Discourage indiscriminate, off-road and off-trail, mechanized or motorized use		
	2.2 Control access in vulnerable areas (e.g., wet or seasonally wet sites; aspen copses and shrub complexes; cliff habitats and rocky slopes, areas of high biodiversity, known areas of species at risk)		
	2.3 Monitor access strategies and activities in terms of their impacts on species at risk		
	2.4 Evaluate existing access in terms of the habitat needs of species at risk		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	and implement measures to minimize threats to those habitats		
	2.5 Encourage education of public recreational users to minimize disturbance and degradation of NDT4		
3. Continue provincial research and inventory work to increase knowledge of NDT4 ecosystems	3.1 Conduct inventories to the Biogeoclimatic Ecosystem Classification site series level to delineate NDT4 ecosystems and to determine opportunities for rehabilitation		
	3.2 Seek funding to maintain or expand the network of range reference areas in NDT4 to support the study of natural processes		
	3.3 Utilize First Nations' knowledge of and traditional management regimes for NDT4 ecosystems		
	3.4 Delineate and map grasslands using various tools (e.g., historical air photos), to include areas that were once grasslands and are currently mapped as forest		

4.5 *Protected Areas*

Protected areas, which include parks and ecological reserves, are created to protect the natural environment, cultural heritage and recreational values of the province.

BC's *Protected Areas Strategy* has two goals. The first goal is to protect viable, representative examples of the natural diversity of each ecosection. These can include the main terrestrial, marine and freshwater ecosystems, the characteristic habitats, hydrology and landforms, and the characteristic recreational and cultural heritage values.

The second goal is to protect special natural, cultural heritage and recreational features. These can include habitat for rare and endangered species, outstanding or unique plant, animal, mineral or fossil features, and important cultural heritage or recreational sites.

Protected areas are open to a more limited range of commercial activities than surrounding Crown lands. Under the guidance of local management plans parks offer opportunities for range and tourism use. Commercial logging, mining and energy development are, however, not allowed.

Different parts of protected areas can be managed for different types of use. Management categories include strict preservation, wilderness, natural environment-based outdoor recreation, intensive recreation and tourism, and historical, cultural and heritage use.

Existing protected areas are listed in Table 1; proposed protected areas are in Table 2 (see map).

Table 1 – Existing Protected Areas (approximate size in hectares)

Duffey Lake Park	2,010	Skihist Ecological Reserve	35
Goldpan Park	5	Skihist Park	35
Marble Canyon Park	550	Skwaha Lake Ecological Reserve	850
Seton-Portage Historic Park	1	Stein Valley Nlaka'pamux Heritage Park	107,190

Table 2 – Proposed Protected Areas (approximate size in hectares)

Bridge River Delta	970	Marble Canyon (park extension)	2,300
Cerise Creek	1,380	Skihist (park extension)	360
Fred and Antoine Creeks	8,300	South Chilcotin (Spruce Lake)	56,540
French Bar Creek	1,130	Yalakom Creek	8,950
Gwyneth Lake	140		

Notes: 1) See Table 3 for management direction.
2) Arthur Seat's (2,330 ha) will remain a Cabinet approved study area while discussions with First Nations continue.

Issues

- Achieving a balance between ecological integrity and public and commercial use within protected areas.
- Overuse and/or inappropriate use can impair or spoil the ecological integrity of protected areas.
- Access management within protected areas needs to allow a variety of public uses, while ensuring tenured access and avoiding general overuse.
- Managing public and commercial recreation uses within protected areas to ensure maximum compatibility.
- First Nations, local government, the public, and user groups seek greater involvement in park planning processes.
- Integrating park designation and management with pre-existing rights and tenures, such as livestock grazing and commercial recreation.
- By preventing access to irrigation water protected areas can preclude future development of some Crown lands with agricultural potential (e.g., French Bar Creek).
- Unclear land and resource management direction can limit resource development

Protected Areas
Stein Valley
Gold Bridge
Bralorne
Seton Portage
Shalalth
Pavilion
Fountain
Lillooet
Spences Bridge
Lytton

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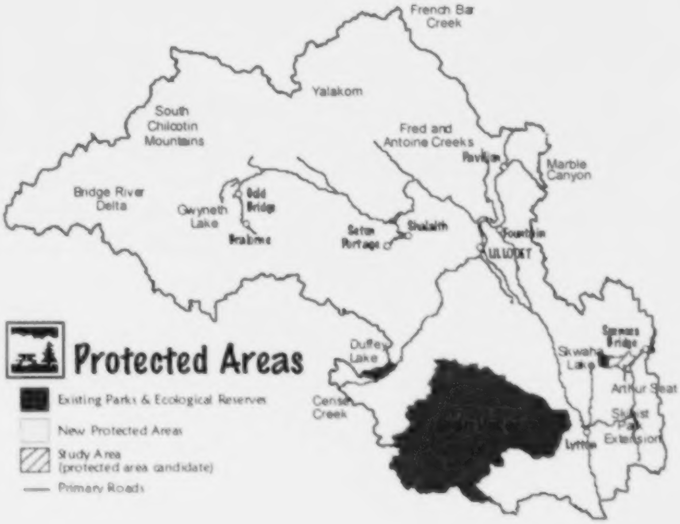
French Bar Creek
Yalakom
South Chilcotin Mountains
Fred and Antoine Creeks
Pavilion
Marble Canyon
Bridge River Delta
Gwyneth Lake
Gold Bridge
Bralorne
Seton Portage
Shalalth
Fountain
LILLOOET
Duffey Lake
Spences Bridge
Skwaha Lake
Arthur Seat
Cerise Creek
Skihist Park Extension
Lytton
Protected Areas
Existing Parks & Ecological Reserves
New Protected Areas
Study Area (protected area candidate)
Primary Roads

opportunities adjacent to protected areas.

- Forest fire, pests and disease are part of nature and are integral to protected areas. If not recognized and addressed they can damage nearby timber harvesting areas thus increasing operating costs or disrupting timber supplies.

Goals

- Protect representative and special natural places for conservation, outdoor recreation, education and scientific study.
- Protect natural environments for the inspiration, use and enjoyment of current and future generations.
- Provide opportunities for a diverse, high quality and safe outdoor recreation while ensuring protection of the natural environment.
- Achieve a balance between ecological integrity, public recreational use, scientific study, and commercial opportunities (e.g., tourism, grazing), in protected areas.

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
1. Manage park use to conserve ecological values	1.1 Disperse use to less heavily used areas as may be allowed by park management plans	Under-represented ecosystems protected Fish, wildlife and critical habitat protected	
	1.2 Use local level plans to manage general public and commercial recreation use and access in order to preserve ecological values		
	1.3 Ration park use by permit if necessary to meet management objectives for ecological integrity		
2. Complete park management planning on a priority basis	2.1 Develop plans (e.g., management direction statements; park management plans) to guide the management of protected areas	Park management direction statements completed within two years of legal establishment	
	2.2 Ensure the public is involved in park management planning		
	2.3 Encourage participation in plan development by interested stakeholders (both regional and provincial)		
	2.4 Ensure that management plans incorporate LRMP direction with respect to the theme and purposes of each park (see Table 3)		
3. Manage park use to maintain the quality of visitor experience	3.1 "Harden" park facilities (e.g., trails and campsites) in a way that prevents site degradation but conserves a natural appearance	Park visitor satisfaction	

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	3.2 Manage general public and commercial recreation use and access in order to maintain the quality of visitor experience		
	3.3 Ration park use by permit if necessary to meet management objectives for the visitor experience		
4. Manage types and modes of recreation to minimize conflicts among users	4.1 Zone different portions of protected areas for various modes of access consistent with the LRMP and the goals for each park	Park user-days	
	4.2 Develop an equitable allocation process between commercial and non-commercial users, consistent with government protocols and park management planning processes		
5. Manage protected areas to achieve a balance between ecological integrity, commercial tourism opportunities, and general park visitors	5.1 Through park management planning processes: develop appropriate limits of capacity on a park by park basis, considering the overall management direction for the park and/or for the zones within the park (e.g., if the park has a conservation focus then a conservative carrying capacity would be appropriate; conversely, if the management direction is for intensive recreation then a less conservative carrying capacity could be used) distinguish limits relative to tourism clients and general park users consider resource allocations between tourism clients and general park users; and apply consistent approaches (e.g., reservation systems, registration and fees) to managing both commercial tourism clients and public users	Commercial / public user conflicts resolved	
	5.2 Include all interests and the general public in park management planning processes to address use capacity levels, environmental sustainability and the quality of the		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
	park experience		
6. Honour pre-existing rights and tenures in new protected areas	6.1 Since logging, mineral and energy exploration and development are not allowed in protected areas, provide prompt and fair compensation for forest, mineral and energy tenures included in them, consistent with government policies		
	6.2 Issue park use permits when authorizing the continuation of existing liens, charges, and encumbrances (other than those prohibited by legislation and policy).		This recognizes *Land Act* tenures, special use permits, water rights, trapping licenses and other legal tenures and rights that are allowed in protected areas
	6.3 Continue pre-existing water licenses that may include domestic, irrigation, diversions and water storage structures. Continue these licenses and the ability to manage them for their licensed use. Ensure that protected area management plans allow for the continued access, maintenance and rehabilitation of water tenures		
	6.4 Existing utilities, such as transmission lines, pipelines and communications sites will be allowed to continue		
	6.5 Allow existing grazing in protected areas		
	6.6 Continue pre-existing uses, rights and tenures of established tourism operators and ensure that park management plans allow for continued access and maintenance needed by these operators		
7. Ensure that uses that are compatible with protected area designation, and which predate its legal designation	7.1 Accommodate pre-existing, compatible uses in the management plan of the park		
	7.2 Where necessary, designate zones within parks to separate incompatible uses		

Objectives	Management Direction/Strategies	Measures of Success/Targets	Intent
(e.g., hunting, fishing, various types of recreation), continue to be accommodated within the protected area			
8. Ensure that the time periods, quality or type and amount of access are consistent with the objectives and prescribed character of the protected area	8.1 Continue current methods of access to existing tenures, subject to periodic review of their appropriateness in light of changing conditions. Address further access management concerns in protected area management planning		
	8.2 Coordinate access planning jointly between managers of parks and adjacent lands to avoid conflicts		
	8.3 In protected areas having existing or potential tourism operations, and where tourism is an acceptable use, determine the desirability, necessity, location and type of access in park management planning		
	8.4 Ensure that park management planning addresses motorized and non-motorized use		
	8.5 Ensure that the rights of way for roads that are excluded from protected areas are sufficiently wide enough to accommodate maintenance, re-alignments, management of hazard trees, etc.		
	8.6 Allow continued access for maintenance of existing water and weather data collection stations (e.g., snow courses, snow pillows, stream gauges) in new protected areas		
9. Manage forest health factors (e.g., disease, insect infestation, noxious weeds) to an acceptable risk level, where they	9.1 For each protected area, assign forest health objectives and strategies that are consistent with its purpose. Include fire management strategies		The "acceptable risk level" will be determined on a site-specific basis between BC Parks and Ministry of Forests
	9.2 Through inter-agency cooperation, protected areas will be monitored for		

Objectives	**Management Direction/Strategies**	**Measures of Success/Targets**	**Intent**
pose a significant risk to resources and/or values	forest health factor indicators in conjunction with adjacent, non-protected areas		
	9.3 Where there is a low risk from forest health factors no human intervention is necessary		
	9.4 Where there is a significant risk from forest health factors, management should follow direction from BC Parks, and consider the potential impact to resources and values within and external to the protected area		
	9.5 Monitor and control weeds consistent with current policies and guidelines. Work cooperatively with other agencies		
10. Manage pre-existing *Range Act* tenures in new protected areas as prescribed in the *Park Amendment Act*	10.1 Manage grazing under pre-existing *Range Act* tenures in new protected areas under appropriate guidelines		
	10.2 Manage ungrazed areas in suitable new protected areas		
11. Evaluate suitability of protected areas as sources of irrigation water for adjacent agricultural land			
12. Consider Table 3 "Management Categories and Key Issues" in management plans for new protected areas			

Table 3 – New Protected Areas: Selected Features, Management Categories and Key Issues

Name	Selected Features	Management Categories and Key Issues
Bridge River Delta	Valley bottom/braided stream ecosystems Critical habitat for grizzly bears	Natural environment; strict preservation Balancing conservation of grizzly bear habitat with use of area (grazing; trappping; hunting)
Cerise Creek	Popular mountaineering area (summer and winter) adjacent to Joffre Lakes Provincial Park Grizzly bear and mountain goat habitat	Natural environment Balancing conservation of bear and goat habitat with use of area (recreation)
Fred and Antoine Creeks	Under-represented ecosystems (dry forests) First Nations cultural artifacts	Natural environment; wilderness Access for owners of private land and water rights Access into the park needs improvement
French Bar Creek	Under-represented ecosystems (dry forests; grasslands) Bighorn sheep migration route	Natural environment Establish under *Environment and Land Use Act* to allow: (a) future development of water resources for agriculture, and (b) future roads, pipelines or infrastructure along Fraser Canyon
Gwyneth Lake	Small lake for destination and day use of motorists on Hurley-Carpenter Lake Road	Intensive recreation
Marble Canyon	Rock and ice climbing Fishing Geological history	Natural environment Allow right of way for improvements on Highway 99 Access for owners of private land
Skihist Park Extension	Extension to popular park beside Trans Canada Highway Hiking trails Under-represented ecosystems (dry forests)	Natural environment
South Chilcotin (Spruce Lake)	Transition from wet coastal to dry interior ecosystems Adjoins Big Creek Park Wildlife habitat (grizzly bear; bighorn sheep; mountain goats) Wildflowers Broad valleys and interconected alpine basins suitable for long backpacking or horse riding trips Well-preserved Mesozoic marine fossils	Wilderness; natural environment Balancing conservation of grizzly bear, sheep and goat habitat with use of area Integrating commercial recreation businesses with public use (winter and summer) Access for owners of private land Scientific research and collection of fossils Public snowmobile users need assured access into Upper Slim Creek

Name	Selected Features	Management Categories and Key Issues
Yalakom Creek	Undeveloped watershed Old growth forests Bighorn sheep habitat and migration route	Wilderness Balancing conservation of sheep habitat and migration routes with use of area

5 Implementation, Monitoring and Amendment

Implementation of the *Lillooet Land and Resource Management Plan* is primarily the responsibility of provincial regulatory agencies. LRMPs are implemented through resource management decisions made by provincial statutory decision-makers. Aspects of the plan are also implemented through activities, projects and partnerships with licensees, tenure holders and area users.

The rate of plan implementation by provincial agencies depends on staffing levels, budgets and legislated priorities. Successful implementation depends on regulatory agencies and project proponents incorporating appropriate, available and up-to-date information into project proposals and resource management decisions.

This plan is intended to be a living document. It will need to respond to new scientific information and provincial policies (e.g., new inventories, changing legislation or regulations).

Minor amendments will be made from time to time during plan implementation. If major changes are needed, government will provide appropriate opportunities for review and comment by interested groups and individuals.

Publication of the plan coincides with ongoing discussions with First Nations concerning their interests in the plan area. These discussions will conclude before land use objectives and protected areas are legally established.

An implementation strategy will be developed setting out the tasks and responsibilities of regulatory agencies and others involved in implementing the plan. Table 1 highlights priority actions. Many of these are also listed in the body of the plan.

Funding has been arranged to support a plan monitoring committee for the first year of plan implementation.

Monitoring will help the plan keep on track and achieve its goals. A monitoring framework will be developed that defines roles and responsibilities, consistent with legislation and policy.

Table 1: Implementation Tasks and Responsibilities

(Note: Implementation tasks are subject to agency staff, budgets, and legislated priorities.)

Task	Lead Agency	Other Participants	Comments	Target Dates
Conclude discussions with First Nations to identify and address their interests in the LRMP, commencing with proposed protected areas	MSRM	First Nations WLAP (BC Parks) for protected areas	To be concluded before legally establishing protected areas or land use objectives	Complete by 2007 for proposed protected areas
Develop implementation strategy	MSRM	Plan Monitoring Committee	Indicates priorities for improving information and assigns responsibilities	Commence by 2005
Develop monitoring framework	MSRM	Plan Monitoring Committee	Includes tracking of improvements in information	Commence by 2005
Initiate discussions with First Nations on their	MSRM	First Nations	Desired outcomes are written agreements that will foster	Initiate in 2004

Task	Lead Agency	Other Participants	Comments	Target Dates
involvement in plan implementation and related projects			information sharing and resource management	
Establish legal land use objectives as required	MSRM	Regulatory agencies; timber licencees; First Nations		Ongoing
Prepare information products to support statutory decision makers, where appropriate	MSRM	Regulatory and tenure issuing agencies		Ongoing
Develop process for tracking the allocation of timber harvesting planning allowances	MSRM	MOF; WLAP; timber licencees	Should be in place before plan implementation	Initiate in 2004
Ensure LRMP document is consistent with results-based regulations and land use policies (e.g., *Forest and Range Practices Act*; working forest policy)	MSRM	MOF; MEM; WLAP; LWBC	To incorporate regulatory and policy changes affecting resource development	Complete by 2007
Designate Scenic Areas; establish visual quality objectives	MOF	MSRM	To commence within one year of confirmation of Zone A and Zone B boundaries.	
Design and initiate plans for spotted owl management, including inventory	WLAP	MOF; timber licencees; mineral industry		Initiate in 2004
Design and initiate a grizzly bear recovery plan	WLAP	MOF; LWBC; timber licencees; tourism and mineral industries		Initiate in 2004
Conduct a tailed frog inventory	WLAP	MOF; timber licencees		Initiate in 2005
Develop mule deer planning cells within winter ranges	WLAP	MOF; timber licensees MSRM		Initiate in 2004
Establish a wildlife management area in Cayoosh Range	WLAP	First Nations; MOF	For managing mountain goat herds and habitat	
Prepare public information or education materials, where appropriate	WLAP		Can include signs, brochures, etc.	Initiate by 2006

Task	Lead Agency	Other Participants	Comments	Target Dates
Legally establish new protected areas (formally define boundaries; draft orders in council or legislative materials)	WLAP (BC Parks, Victoria)	MSRM; LWBC; MEM; MOF; First Nations	Boundaries to be consistent with Surveyor General guidelines; need to address land status, legal encumbrances, and future access corridors.	Timeline is contingent on concluding consultations with First Nations.
Prepare management direction statements for new protected areas	WLAP (BC Parks)	User groups; tenure holders	Needs to wait on legal establishment of protected area	Within two years of legal establishment
Manage, monitor and enforce new protected areas	WLAP			Within one year of legal establishment
Complete priority access management measures, listed below: Texas Creek road, downstream of junction with Molybdenite road: close road to public motor vehicle use in spring (May 1 to June 30); Texas Creek watershed: close watershed to off-road, public motor vehicle use in spring (May 1 to June 30); Van Horlick Creek road, at bridge at 8 kilometres: close road to public motor vehicle use in spring (May 1 to June 30); Davey Jones Creek road: close road to public motor vehicle use in spring (May 1 to June 30); Red Mountain road: close road to public motor vehicle use in spring (May 1 to June 30)	WLAP; MOF	MSRM; MEM; timber licensees; tenure holders; general public	Temporary or regulatory control measures preferred	Initiate in 2004
Prepare a management plan for designated mining/tourism areas in South Chilcotin Range	Mineral and tourism industries	Local government; MSRM; MEM; WLAP; MOF	Plan should be guided by the intent of the Mining / Tourism *Memorandum of Understanding*, and include input from industry, business, local communities, public recreation, and conservation interests	Complete by 2005
Design and initiate a	Mineral	MEM; MSRM	Study is contingent on	Commence by

Task	Lead Agency	Other Participants	Comments	Target Dates
mineral resource study in the plan area to support mineral exploration and development	industry		partnership support	2007
Continue work to improve land and resource information to support sound, scientifically-based and integrated management	All agencies		Contingent on agency staff, budgets and legislated priorities Updated information (e.g. habitat maps) can be added to the plan without formal amendment, provide overall balance of plan is maintained	Ongoing
Monitor commercial and public recreational use throughout the plan area to identify potential problems for grizzly bears and develop feasible solutions	To be determined	To be determined	Monitoring will be included in grizzly bear recovery and park management. Commercial recreation (resource-based tourism) operators have played a role in data collection and stewardship and it is expected that this will continue in the future. Design and implement a monitoring system for commercial and recreation uses to assess levels of use in grizzly bear habitats	

6 Glossary

A

Access	(verb) To enter an area, by land, water or air. (noun) 1) Physical entry into an area. 2) A physical feature, such as a road, track, trail, aircraft landing site or boat launch, that makes entry into an area easier.
Access management	Steps taken to make entry into an area either easier or harder, depending on the desired management goal (e.g., enhancing resource development; protecting wildlife). Can be limited to defined areas, certain periods of time, or specific uses. Ways to manage access include public education, signs, regulations, or physical barriers such as gates.
Aggregate	Earth materials used for construction purposes (e.g., sand, gravel, crushed rock).
Agricultural Land Reserve (ALR)	Land dedicated for agricultural use and regulated by the *Agricultural Land Commission Act*. The reserve covers about 5% of the province and includes most of BC's highest quality agricultural land. The reserve includes private and public lands, land that is currently being farmed, and land that has agricultural potential. Some non-agricultural uses of the ALR are also allowed, subject to regulations.
Alienation	The transfer of a right to use land from the Crown to a third party by means of a grant, lease or permit. It also includes the designation of public land for a special interest (e.g., a *Land Act* reserve). The term only applies to Crown land or resources. May be temporary or permanent.
Allowable annual cut (AAC)	The average volume of wood that may be harvested each year under sustained yield management. It is usually expressed as "cubic metres of wood per year." The Chief Forester sets the AAC for timber supply areas (TSAs) and tree farm licences (TFLs) in accordance with Section 8 of the *Forest Act*.
Alpine	(geography) Of or relating to mountains. (biology) Living or growing on mountains above tree line.
Animal unit month (AUM)	The amount of forage required for one month by an average cow (genus *Bos*) aged 6 months or older. The term is used in range management and grazing tenures for ranching operations.
Aquatic ecosystem	A functioning natural system that includes a body of water, such as a stream, lake or wetland, and all living (biotic) and non-living (abiotic) components within it.
Arable	Land that can be cultivated for growing crops.
Archaeological site	An area that contains physical evidence of past human activity and which is explored or interpreted using archaeological research techniques. Sites may have been used either before or after European contact, but may not have a direct link with the communities that now live near them.
Avoid	To refrain from or prevent the occurrence of an event, taking into consideration technical and economic feasibility, as well as economic and environmental costs of alternative actions.

B

Back country	An informal term used in recreation or tourism planning to identify areas that are in a mostly natural state. Back country areas usually do not have road access. Their appeal is a relative lack of development. Synonyms: wilderness; primitive.
Basal area per hectare	The total area of the cross-section of trees, measured near their base (generally at breast height including bark), that occur within one hectare of land. Commonly shortened to "basal area".
Biodiversity	The diversity of plants, animals and other living organisms in all their forms and levels of organization. It includes the diversity of genes, species and ecosystems as well as the functional and evolutionary processes that link them. Synonym: biological diversity.
Biodiversity emphasis options	A range of three options for emphasizing biodiversity at the landscape or watershed level. Each option is designed to provide a different level of natural biodiversity and a different risk of losing elements of biological diversity. The term is used in forestry management.
Blue-listed species	Species that are considered vulnerable to decline because they are particularly sensitive to disturbance from human activities or natural events.
Buffer	A strip of land next to roads, trails, watercourses and recreation sites where disturbance is not allowed, or is closely monitored, in order to preserve or enhance aesthetic and other qualities. Short for "buffer strip" or "buffer zone". The zone often includes undisturbed vegetation.

C

Carrying capacity	The average number within a population that can be sustained on a management unit, compatible with management objectives for the unit. It is a function of site characteristics, management goals, and management intensity.
Clearcutting	The process of removing all trees, large and small, in a stand in one cutting operation. The stand is replaced with an even-aged crop of new trees through planting or natural regeneration.
Clearcuts with reserves	A variation on clearcutting in which some trees are retained, either uniformly or in small groups, for purposes other than regeneration (e.g., wildlife habitat; aesthetics; erosion control; cost reduction).
Community watershed	1) An area designated as a community watershed under the *Forest Practices Code of British Columbia Act.* 2) A drainage area that is managed to provide domestic water, licensed under the *Water Act*, to a defined community of users.
Compensate	To offset an error, a defect or an undesired effect; to make up for; to counterbalance; to make payment or reparation for.
Connectivity	A qualitative term describing the degree to which late-successional ecosystems are linked to form an interconnected network. The degree of interconnectedness and the characteristics of the links vary in natural landscapes due to topography and types of natural disturbance. Breaking these links results in fragmentation.
Consider	To give serious thought to; to think carefully about; to take into account. Synonym: ponder, weigh.

Corridor	A band of vegetation, usually older forest, which serves to connect distinct patches on the landscape. By providing connectivity, corridors permit the movement of plant and animal species between what would otherwise be isolated patches.
Critical grizzly bear habitat	Areas that are well suited for food, bedding or denning, especially where these are in short supply. They include avalanche tracks, meadows and wetlands that are rich in herbs, glacier lilies, white bark pine, skunk cabbage and berries. Salmon spawning areas are also important. Most critical habitats are relatively small areas (1 to 5 hectares) but they contribute disproportionately to forage requirements.
Critical wildlife habitat	Part or all of a place occupied by a wildlife species and recognized as being essential for their maintenance.
Culturally modified tree (CMT)	A tree that has been altered by native people as part of their traditional use of the forest.

D

Disposition	The transfer of ownership from Crown (i.e., public) to private. Term applies to Crown land or resources.

E

Ecosystem	An ecological community together with its environment, that functions as a unit. It includes all living organisms (plants, animals, microbes) and all non-living physical and chemical components (nutrients, energy). An ecosystem can be any size - a log, pond, field, forest, or the earth's biosphere - that functions as a whole unit.
Encroachment	A natural process that converts grasslands to forest.
Endangered species	Endangered species face imminent extirpation or extinction. One of three designations (extirpated, threatened, endangered) used by the Ministry of Water, Land and Air Protection for species that are on the province's "red list".
Enhance	To make greater, more attractive, more valuable.
Environmentally sensitive area (ESA)	Areas requiring special management attention to protect important scenic values, fish and wildlife resources, historical and cultural values, and other natural systems or processes. Environmentally sensitive areas can include fragile or unstable soils that may deteriorate unacceptably after forest harvesting, and areas of high value to non-timber resources such as fisheries, wildlife, water, and recreation.

F

Forest resources	Defined in the *Forest Practices Code of British Columbia Act* as resources and values associated with forests and range including, without limitation, timber, water, wildlife, fisheries, recreation, botanical forest products, forage and biological diversity.
Forage	Grasses, herbs and small shrubs that livestock or wildlife eat.
Forest Practices Code (FPC)	A shortened term for the *Forest Practices Code of British Columbia Act*, and all associated regulations and technical guidebooks that, together, govern forest and range practices in British Columbia.

Forest and Range Practices Act (FRPA)	New, results-based legislation, passed in January 31, 2004, intended to completely replace the *Forest Practices Code* by 2006
Fragmentation	The process of transforming large areas of continuous forest into smaller patches surrounded by disturbed areas. In nature this results from fire, landslides, windthrow and insect attack. In managed forests the main cause of disturbance is timber harvesting.
Front country	An informal term used in recreation or tourism planning to identify areas that are easily reached by paved or maintained roads. Front country areas provide a wide range of recreational opportunities (e.g., sight-seeing, visiting cultural and historical attractions, entertainment, shopping) and ready access to food and accommodation.

G

Goal	A term used in resource planning to describe a future vision for the land, its resources or their use. A goal expresses intent, or broad aims, without limitations in time.
Green-up	The length of time after harvesting needed for trees to reach a desired height (usually 3 metres) in order to maintain water quality, wildlife habitat, soil stability or aesthetics before harvesting is permitted in adjacent areas.

H

Highway	Roads that are the responsibility of the Ministry of Transportation. In this plan they are excluded from access management direction.
Historic and traditional access	Roads, tracks or trails constructed for various reasons and used by a variety of people over a long period of time (at least 20 - 30 years, but may vary). The term includes access built or maintained by First Nations, settlers, ranchers, miners or loggers.

I

Industrial / commercial access	Access infrastructure intended mainly for industrial or commercial purposes (e.g., energy, mining, ranching, timber harvesting, tourism). Public use may be restricted. Industrial or commercial use may be subject to conditions in order to meet LRMP objectives.
Issues	A term used in resource planning to describe problems and unrealized opportunities with respect to the land, its resources and their use. Identifying and documenting issues is an important first step that helps define the problems to be addressed or solved. It also helps gather relevant information and develop appropriate goals and objectives.

L

Livestock	This plan uses the term in its broadest sense, meaning all domesticated animals. The *Range Act*, however, applies only to cattle, goats, horses, mules, asses, llamas and sheep. It does not apply to buffalo, swine, poultry, exotic game animals or animals designated under the *Wildlife Act*.
Long term activity centre (LTAC)	An area capable of sustaining a breeding pair of spotted owls, either immediately or in the future, after habitat recruitment or restoration.

M

Maintain	To carry on; to continue; to keep in a certain state; to preserve from failure or decline.
Manage	To direct the use of or maintain control over; to gain influence; to carry on; to treat with care.
Mid country	An informal term used in recreation or tourism planning to identify areas that lie between front country and back country. Mid country areas are relatively easily reached by roads, although road quality can vary greatly (paved or rough; maintained or unmaintained). Mid country attractions include rural communities, stand-alone lodges, farms, guest ranches, and road-accessible campsites.
Migration corridors	An informal term that refers to bands of vegetation used by larger ungulates for migration between different ranges (e.g., summer range; winter range, kidding range).
Mine	An area that is mechanically disturbed or excavated in order to explore for, or produce, ore, rock or minerals.
Mineral	Any natural earth or rock substance, whether organic or inorganic, that can be extracted or obtained from the ground or water and used in economic activities. Examples in Lillooet include gold, silver, copper, lead, mercury, uranium, stone, sand and gravel.
Minimize	To reduce to the smallest possible amount, size, extent or degree, taking into consideration technical and economic feasibility, as well as economic and environmental costs of alternative actions.
Mitigate	To make or become less severe, harsh or intense.
Mitigation	The act of mitigating, or the state of being mitigated; reduction of anything painful, harsh or severe. In resource management this includes taking action to reduce the impact of one resource on another.
Moose Management Units (MMUs)	Small areas (from 1 to 500 hectares) that are especially suitable for moose wintering and/or foraging. Consist of a wetlands or riparian habitat surrounded by a ~200 metre forested buffer. The surrounding buffer can incorporate old burns, deciduous stands and non productive brush. Usually located within drier biogeoclimatic variants (e.g., IDFdk1, IDFdk2, IDFdk3, IDFunk, MSxv, MSxk, MSdm2, MSdc, ESSFdv, ESSFxc, ESSFxv) and some sub-alpine parkland areas.

N

Natural	As found in nature and not involving anything made or done by people.
Natural disturbance type (NDT)	A classification system, used in forest management, based on historic patterns of fire, insects, wind, landslides and other natural agents.
Natural disturbance type 4 (NDT4)	NDT4 is subdivided into three types. Two of them (NDT4a and NDT4b) are characterized by frequent, low-intensity fires. They are described as fire-maintained ecosystems. NDT4a comprises grassland site series while NDT4b is comprised of dry forested ecosystems. The ideal or "classical" NDT4b system consists of large diameter, widely spaced trees, a well-developed grass/shrub understorey, and a mosaic of thickets and openings interspersed over the landscape. The third type (NDT4c) consists of higher elevation, wetter sites in which stands of

	forests are replaced by fire.
Noxious weed	Any plant so designated by the *Weed Control Regulations* and identified on a regional or district noxious weed control list.

O

Objective	A concise (and preferably measurable) statement of a desired future condition for a resource or resource use which is to be attained through management action. Objectives usually indicate the time and the parties involved in achieving them. Under forestry legislation some objectives can become legally binding.
Old-growth management areas (OGMAs)	Areas that contain or are managed to replace specific structural old-growth attributes.
Open road	A road which is open year-round to vehicular traffic for all types of use. It includes all major travel routes (highways, secondary roads and main haul roads). Open roads may not always be passable by all types of vehicles, depending on road conditions and maintenance standards.
Operational plans	Operational plans describe on-the-ground resource use and management for a specified area. Examples include forest development plans, logging plans, silviculture plans, range-use plans and access management plans.
Optimize	To make as perfect, effective, or functional as possible.

P

Patch	A stand of similar-aged forest that differs in age from adjacent patches by more than 20 years. When used in landscape design, the term refers either a natural opening that led to even-aged forests or an opening created by logging.
Patch cuts	A silvicultural system that creates openings less than one hectare in size and is designed to manage each opening as an even-aged stand.
Potential natural community (PNC)	The plant community that would be established if succession was allowed to runs its natural course.
Predictive ecosystem mapping (PEM)	A computer-based method of mapping ecosystems using available information, lower-cost field sampling, and known relationships between ecology and landscapes.
Protect	To keep from harm, attack, or injury; to keep safe or defend.
Protected area	A designation of areas of land and water set aside to protect natural heritage, cultural heritage or recreational values (may include national park, provincial park or ecological reserve designations.)
Protected Areas Strategy (PAS)	British Columbia's official strategy to protect 12 per cent of the provincial land base by the year 2000. The goals of the strategy are to protect viable, representative examples of natural diversity in the province, and special, natural, recreational and cultural heritage features.

R

Rangelands	These include natural grasslands, forests, shrub lands, alpine areas, wet meadows, cutblocks and other areas on which there is vegetation suitable for grazing or browsing by domestic livestock and wildlife.

Reasonable	Governed in accordance with reason or sound thinking, within the bounds of common sense; not extreme or excessive; fair.
Recreation opportunity spectrum (ROS)	A mix of outdoor settings based on remoteness, size of area, and evidence of humans, which allows for a variety of recreation activities and experiences. Settings form a continuum. Categories include: rural, roaded resource, semi-primitive motorized, semi-primitive non-motorized, and primitive.
Red-listed species	Includes any indigenous (native) species or subspecies ("taxa") considered to be extirpated, threatened or endangered in British Columbia. Extirpated taxa no longer exist in the wild in BC, but do occur elsewhere. Threatened taxa are likely to become endangered if limiting factors are not reversed. Endangered taxa face imminent extirpation or extinction.
Referral	A notification and request for input regarding potential resource development.
Regulated hunting	Hunting of wildlife species that is consistent with provincial hunting regulations and licensing.
Rehabilitation	Activities intended to return roads, trails or other disturbances to their original state. Rehabilitation of roads can include re-contouring, resloping the road prism, returning soil to the road surface and replanting it. In a general the term includes any remedy for environmental damage.
Reserve	An area of Crown land that, by law or policy, is not available for a particular type of resource use or development. Different reserves apply to different resources or uses (e.g., minerals, timber, land, agriculture, range).
Restore	To bring back into existence or use, to bring back to an original state.
Restoration	The return of an ecosystem or habitat to its original community structure, natural complement of species and natural functions.
Riparian	An area of land adjacent to a stream, river, lake or wetland that contains vegetation that is distinctly different from adjacent upland areas, due to the presence of water.

S

Scenic area	Any scenic landscape or visually-sensitive area that has been identified through a visual landscape inventory or planning process carried out or approved by a district manager in the Ministry of Forests.
Seasonal access	Access that is managed on a seasonal basis to achieve certain defined objectives. This plan defines three seasons: spring (May 1 to June 30); summer (July 1 to November 30); and winter (December 1 to April 30) and a variety of areas (see maps in Section 3.5). All areas remain open to non-motorized use at all times. Motorized access by industrial and commercial users is allowed in all seasons but may have conditions to meet LRMP objectives. Motorized access by non-industrial or non-commercial users is limited or restricted.
Seral stage	Any stage of development of an ecosystem from a disturbed, unvegetated state to a climax plant community.
Silvicultural systems	A planned cycle of activities by which a forest stand, or group of trees, is harvested, regenerated, and tended over time. Silvicultural systems used in British Columbia include clearcutting, seed tree, shelterwood, and selection. Each name reflects the type of stand structure created by harvesting.

Site Index	An expression of the quality of a stand of trees at a defined site and age (based on tree height).
Stand-level biodiversity	Term applies to the management of biodiversity at a stand or cutblock scale. Includes making provision for wildlife tree patches, certain types of vegetation and coarse woody debris.
Stream classification	A formal method of classifying all or part of a stream based on its physical and biological attributes (e.g., presence or absence of fish, width, gradient, bed material, etc.) and used in managing forestry activities under the *Forest Practices Code*.
Sustainable	A state or process that can be maintained indefinitely. The principles of sustainability integrate three closely interlinked elements—the environment, the economy and the social system—into a system that can be maintained in a healthy state indefinitely.

T

Tenure	The act, fact, or condition of holding something in one's possession. In resource management the term refers to a wide variety of rights to occupy, control or use land or resources that are managed by the Crown (e.g., timber, minerals, fish, range, wildlife, commercial recreation, etc.).
Temporal	Of or relating to time.
Threatened species	Threatened species are likely to become endangered if limiting factors are not reversed. One of three designations (extirpated, threatened, endangered) used by the Ministry of Water, Land and Air Protection for species that are on the province's "red list".
Timber harvesting land base (THLB)	Crown forest land within the plan area that is currently considered economical and feasible for timber harvesting.
Traditional use	Beliefs, customs, and practices pertaining to the use of land by a living community of people that have been passed down through the generations.
Traditional and historic access	Roads, tracks or trails constructed for various reasons and used by a variety of people over a long period of time (at least 20 - 30 years, but may vary). The term includes access built or maintained by First Nations, settlers, ranchers, miners or loggers.
Trails	A marked or established path or route, especially through a forest or mountainous region (e.g., Gun Creek trail; Spruce Lake trail). Generally they are a single-track and not passable to four-wheeled vehicles. They often overlap with historic and traditional trails. They are generally not maintained and usually do not appear on all maps.

U

Undercutting	Under the *Forest Act*, holders of specific licence agreements must ensure that the volume of timber they harvest are within certain limits. Undercutting refers to levels of harvest below these limits.
Ungulate	Generally, any hoofed mammal (e.g., cow, horse, deer, moose, goat, sheep).
Unregulated hunting	Hunting of wildlife species without a license (e.g., poaching) or hunting that is not sanctioned by government.

V

Viable population	A self-sustaining population with a very good chance of surviving over the long-term.
Visual impact assessment (VIA)	A method of evaluating the visual effects of logging and road building activities in a scenic area.
Visual quality	The character, condition and quality of a scenic landscape and how it is perceived, preferred or valued by the public.
Visual quality class (VQC)	A specialist's recommendation describing the level of alteration that would be appropriate for a scenic landscape. The recommendation considers visual and other values.
Visual quality objective (VQO)	A resource management objective established by government that reflects the desired level of visual quality for an area, based on physical characteristics and social concern. The five categories in common use (preservation, retention, partial retention, modification, maximum modification) range from no visible change to large-scale or highly visible change.

W

Watershed	An area of land that collects and discharges water into a single main stream through a series of smaller tributaries. A large watershed may contain several smaller watersheds.
Wilderness	An area of land (usually more than 1000 hectares) that, on the whole, retains its natural character and on which human impact is temporary and little noticed in the long run.
Wildlife habitat area (WHA)	A mapped area of land that government has determined is necessary to meet the habitat requirements of certain species of wildlife.
Wildlife tree	A standing, live or dead tree (or group of trees) with special characteristics that provide valuable habitat for wildlife conservation or enhancement.
Wildlife tree patch (WTP)	An area specifically identified for the retention and recruitment of suitable wildlife trees. It can contain a single wildlife tree or many. Synonym: group reserve.

Z

Zone A (Visual Management)	Areas of high visual importance, for example, along paved travel corridors and adjacent to communities. Management intent is that lands within Zone A will be designated as known scenic areas and will have visual quality objectives.
Zone B (Visual Management)	Areas of moderate visual importance or areas where visual inventories are incomplete. Management intent is to attempt to achieve visual quality classes.

7 Appendices

1) Memorandum of Understanding regarding the management of Spotted Owl in the Lillooet Timber Supply Area, November 25, 2003

2) Memorandum of Understanding between BC and Yukon Chamber of Mines, Council of Tourism Associations and Mining Association of BC, January 22, 2004

3) Letter of Agreement between St'at'imc Chiefs Council and the Province of BC, June 7,2004

4) Lillooet TSA Community and Forest Economic Interests Memorandum of Agreement, June 28, 2004

MEMORANDUM OF UNDERSTANDING

Between Ainsworth Lumber Co. Ltd., the Ministry of Forests, the Ministry of Water, Land and Air Protection, and the Ministry of Sustainable Resource Management

Regarding the management of Spotted Owl in the Lillooet Timber Supply Area (TSA)

November 25, 2003

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1 Purpose:

i. To ensure that Spotted Owl Long-Term Activity Centres (LTAC) in the Lillooet TSA are managed so that the attributes necessary to support Spotted Owls are maintained over the next three years or until a long-term management strategy is in place.

ii. Outline a reasonable process, including roles and responsibilities, for developing an operational management plan, which would include identifying where there are harvest opportunities for next three years in the Spotted Owl Long-Term Activity Centres in the Lillooet TSA. This operational management plan will provide sufficient information to enable the Delegated Decision Maker (DDM) to make decisions on proposed Forest Development Plans and Forest Stewardship Plans.

2 Principles:

i. All parties commit to supporting the outcome of this MOU.

ii. All parties commit to open communications, both internally and externally.

iii. The operational management plan will be based on the management guidelines as described under section 6 ii.

iv. All parties commit to developing reasonable transition strategies as new information or government direction becomes available.

v. All parties acknowledge that certainty will be established through Forest Development Plan and/or Forest Stewardship Plan approvals.

3 Objectives:

i. To improve working relationships and trust between government agencies and Ainsworth Lumber Co. Ltd. regarding the management of Spotted Owls.

ii. To establish a Technical Working Group to implement this MOU.

iii. To establish a process and a workplan for implementing this MOU, including accountabilities and timelines. The operational management plan will include a set of detailed management guidelines that will identify what is necessary in order to maintain the Long-Term Activity Centres in suitable condition for Spotted Owls. This will enable Ainsworth Lumber Co. Ltd. to identify harvest opportunities in Long Term Activity Centres and will enable the Delegated/Statutory Decision Maker to approve proposed Forest Development Plans and/or Forest Stewardship Plans.

iv. To develop a communication strategy to be used in implementing this MOU.
v. To develop a dispute resolution mechanism to be used as necessary.
vi. To agree on accountabilities and timelines for the development of a work plan to complete the operational management plan.

4 Communications Strategy:

4.1 Internal Communications

- All parties commit to open and timely sharing of data and information with other members of the Technical Working Group and the senior level agency managers signing this agreement.
- Any information exchanged will be kept confidential within the Technical Working Group, unless it is expressly intended to be shared with a wider audience and/or the public. Sharing of information with other Ainsworth staff that require it for operational purposes is acceptable.
- The Ministry of Water, Land and Air Protection is the custodian of digital information regarding Spotted Owl populations and habitat.

4.2 External Communication

- All external communications must be consistent with this MOU.
- All external communications must support decisions that are made under this MOU.
- All parties are free to communicate that this MOU exists to their customers, clients, non-government organizations (NGO's), and members of the public.

5 Dispute Resolution Process:

In the case of disputes at the Technical Working Group level, the following dispute resolution process will be employed. At each level, best efforts will be made to resolve the dispute in an expedient manner:

- Step One – Attempt to resolve the dispute by consensus within the Technical Working Group
- Step Two – The senior staff signing this MOU will attempt to resolve the issue.
- Step Three – Document the different perspectives in the dispute. If necessary to resolve the issue in a timely manner, and agreed to by the parties involved, they may engage a mutually acceptable third-party facilitator or mediator (subject to funding).

6 Process for Implementing this MOU:

i. This MOU establishes a Technical Working Group, consisting of the following members (additional members may be added to this group upon agreement of the Technical Working Group):
  - Don Embury and/or Jerome Jang (Ministry of Forests, Cascades Forest District)
  - Don Brown (Ainsworth Lumber Co. Ltd.)
  - Rick Kooistra (Ainsworth Lumber Co. Ltd.)
  - John Surgenor (Ministry of Water, Land and Air Protection)
  - Phil Belliveau (Ministry of Water, Land and Air Protection)
  - Rachael Pollard (Ministry of Sustainable Resource Management)

ii. The Technical Working Group will as its first order of business, establish the baseline guidelines that will be followed for Spotted Owl management. It is assumed that the framework developed for the "*Spotted Owl Management Plan for the Chilliwack and Squamish Forest Districts*" (May 1999) will be followed with suitable adjustments for forest conditions and habitat requirements in the Lillooet TSA. These adjustments may include, but is not limited to, the characterization of suitable and superior habitats, the definition of connectivity corridors, and the inclusion of other relevant science (i.e. work done in the East Cascades).

iii. The Technical Working Group will establish a workplan for developing the operational management plan by December 5th, 2003. This workplan will include:
  - Contents of the operational management plan (for example, written text, analysis and maps).
  - Process, including timelines and accountabilities, for completing the final operational management plan.
  - Interim baseline guidelines that will be followed for Spotted Owl management (see section 6 ii, above).
  - A process to manage any new areas where spotted owls are found during the period of time that the MOU is in effect.
  - Documentation of the Decision Support Services required to complete the operational management plan, including GIS analysis and map production.
  - Terms of Reference for developing an inventory plan for future inventory work.

iv. The Technical Working Group will complete the first draft of the operational management plan no later than February 15th, 2004.

7 Approval

This Memorandum of Understanding is approved through the signatures of the following representatives:

Mark T. Hopkins, R.P.F., Manager, BC Woodlands
Ainsworth Lumber Co. Ltd.

Nov 26, 2003
Date

Rod DeBoice, District Manager, Cascades Forest District
Ministry of Forests

Dec 01, 2003
Date

Monty Downs, Regional Manager Thompson Region
Ministry of Water, Land and Air Protection

03/11/26
Date

Steve Carr, Regional Director Southern Interior Region
Ministry of Sustainable Resource Management

Nov 28/2003
Date

MEMORANDUM OF UNDERSTANDING

BC & YUKON CHAMBER OF MINES

COUNCIL OF TOURISM ASSOCIATIONS OF BC

Council of
Tourism Associations
of British Columbia

MINING ASSOCIATION OF BRITISH COLUMBIA

MINING
Mining Association of British Columbia

January 22, 2004

MEMORANDUM OF UNDERSTANDING

BETWEEN:

BC & YUKON CHAMBER OF MINES

("BCYCM")

AND:

COUNCIL OF TOURISM ASSOCIATIONS OF BC

("COTA")

AND:

MINING ASSOCIATION OF BRITISH COLUMBIA

("MABC")

(Collectively referred to as the "Parties")

WHEREAS the BCYCM and the MABC support and promote the BC mineral exploration and mining sectors to be leaders in sustainable mineral development through initiatives such as the BC Mining Sustainability Initiative;

AND WHEREAS the Council of Tourism Associations of BC represents tourism associations and businesses in BC and is mandated to advocating and educating the business community, the media and government on behalf of the tourism sector;

AND WHEREAS the Parties are resource-dependent industries, which create wealth from BC's land base and have a footprint on the landscape;

AND WHEREAS the Parties acknowledge the ongoing importance of promoting mineral exploration, mining and tourism in the economy of the Province of British Columbia;

AND WHEREAS both parties agree that a business-to-business approach to promoting good neighbour practices will result in furthering the growth and management of both industries in relative harmony;

AND WHEREAS the Parties desire that this Memorandum will lead to a better understanding of each others businesses and the impacts those businesses may have on each other's interests;

AND WHEREAS the Parties intend that this Memorandum will result in cooperation to pursue common goals and resolve differences that may arise from time to time.

Therefore the undersigned agree to enter this Memorandum of Understanding as follows:

1. PURPOSE

1.1. The purpose of this MOU is to provide a foundation of mutual recognition, respect, education, open dialogue and cooperation between the Parties and their respective Members.

2. PRINCIPLES

2.1. This MOU reflects the Parties' joint desire to create an atmosphere of business certainty and investment confidence in the province regarding access to land and land use as it pertains to relations between mineral exploration, mining and tourism. Certainty around land access and land use supports investment confidence, and ensures the growth of both industries.

2.2. The Parties will consider the activities of each sector *in balancing* economic, social and environmental factors.

2.3. The Parties respect each sector's business objectives and their pursuit of activities to maximize their economic benefits.

2.4. The Parties recognize that they each have a responsibility to maintain high standards of environmental performance.

2.5. The parties recognize that First Nations assert rights and title over crown lands and resources and will collaborate with government in consulting and finding workable accommodations for these interests in pursuing their business objectives.

3. MUTUAL INTERESTS

3.1. The Parties will pursue constructive industry-*to*-industry dialogue that recognizes the need for the sustainability of each industry, and the need for certainty related to land access and land use for both industries.

3.2. The Parties acknowledge that in areas outside parks and protected areas where tourism, mineral exploration and mining are allowed, potential conflict between respective members may occur. The Parties will encourage their members to pursue early business-to-business consultations to coordinate activities and take reasonable actions to avoid unnecessary and unreasonable interruption to each others' operations.

3.3. The Parties agree that they will promote mutually beneficial business arrangements on an ongoing basis and seek business-to-business solutions to avoid conflicts when the potential for conflict arises.

3.4. The Parties further agree that if conflict between their respective members should arise that cannot be resolved through dialogue or other arrangements, the Parties, at the request of their respective members, will assist in resolving conflicts as described in Section 7.

3.5. The Parties will inform each other and, where appropriate, may collaborate on issues of common interest on matters in respect of public policy and legislation.

3.6. The Parties will encourage all levels of government to create a business climate that promotes mutual business opportunities and takes into consideration the interests and reasonable operating requirements of each sector.

3.7. The Parties agree that they will work with their respective memberships to promote a greater understanding of the benefits, opportunities, interests and normal business and operational practices of each other's members.

3.8. The Parties will work together to encourage government to create and maintain current, easily accessible maps and databases identifying all resource and land tenure locations and contact information for mineral industry and tourism operators.

3.9. The Parties agree that during the planning and evaluation of lands for designation as protected areas, responsible authorities and proponents should:

3.9.1 be encouraged to consider mineral resource and tourism potential before such designation; and,

3.9.2 consider whether reasonable access through areas proposed for protection can be accommodated for exploration, mining and tourism outside the protected area.

3.10 The Parties will hold regular meetings.

4. EXPLORATION AND MINING INTERESTS

4.1. The Parties recognize and support the Two-Zone system for mineral exploration and mining in British Columbia. Zone One includes lands on which exploration and mining is prohibited and includes the following: an area in which mining is prohibited under the *Environment and Land Use Act; a park under the Park Act* or the *Park (Regional) Act*; a park or ecological reserve under the *Protected Areas of British Columbia Act*; an ecological reserve under the *Ecological Reserve Act*; and a protected heritage property. In Zone Two, mineral exploration and mining are permitted, subject to applicable legislation, regulations, government policies, and the legal rights of other parties.

4.2. Subject to paragraphs 5.1 and 5.2, the Parties agree that in Zone Two, every effort will be given to provide access for mineral exploration and mining and security of tenure for mineral tenure holders.

4.3. The Parties acknowledge that mineral resources are hidden and areas of high mineral potential are not always readily determinable. In areas where exploration and/or mineral development activities are being pursued, COTA will encourage its members to:

4.3.1 make themselves aware of known mineral potential in areas where they wish to operate;

4.3.2 take into consideration issues that may have the potential to adversely affect exploration and mining activities; and,

4.3.2 make reasonable efforts to minimize impacts on essential components of exploration and mining activities such as access and security of tenure.

5. TOURISM INTERESTS

5.1 COTA has identified lands that it believes are important in establishing and maintaining a tourism land base. BCYCM and MABC acknowledges that in Zone Two, certain areas have been identified by COTA that have high tourism use and values. In these areas, the BCYCM and MABC will encourage their members involved in mineral exploration and mining activities to:

5.1.1 take into consideration issues that have the potential to affect tourism operations; and,

5.1.2 make reasonable efforts to minimize impacts on tourism activities and natural features important to those tourism activities.

5.2 The Parties agree that during the planning, environmental assessment, operation, closure and reclamation of any mining project, responsible authorities, project proponents, and mine operators should be encouraged to consider impacts and reasonably accommodate tourism activities and values.

6. PROTOCOLS

To support a beneficial ongoing business relationship, and avoid conflict, the Parties agree to promote the following protocols between their respective members co-existing in a given geographical area:

6.1 Consultation

6.1.1 The Parties undertake to communicate with each other regularly on issues of concern and to the extent practical, coordinate communications to the public on matters of mutual interest.

6.1.2 Members of the BCYCM, MABC and COTA whose interests are in the same general area should strive to make themselves known to each other, and commit to on-going open communication with the objective of reaching early agreement on aspects that could potentially affect each other's ongoing operations.

6.1.3 Members having difficulty in resolving differences will be encouraged to advise their respective Associations, after which the Parties should consider whether to recommend the conflict resolution process described in Section 7 or propose some other approach.

6.2 Mutual Understanding and Promotion

6.2.1 The Parties will encourage their Members to undertake to provide education to their employees and clientele on current business and operational practices employed by each industry, economic and policy issues, and contribution to local and provincial economies.

6.3 Compensation

6.3.1 The Parties agree with the principle that should existing tenured tourism business interests be displaced or subjected to a substantial direct and measurable economic loss as a result of a future mining project that is initiated on a mineral tenure established after the tourism tenure was established, fair market compensation should be provided to the tourism operator.

6.3.2 The Parties agree with the principal that should existing mineral tenures be displaced or subjected to a substantial direct and measurable loss as a result of a tourism tenure established after the mineral tenure was established, fair market compensation should be provided to the mineral tenure holder.

6.3.3 The Parties agree to work with government on the structure and delivery mechanism for the compensation process.

7. CONFLICT RESOLUTION

The Parties agree that, where significant unresolved disputes exist between specific members, they will encourage those members to pursue resolution of the dispute through the procedures outlined in Appendix A.

8. GENERAL TERMS

In keeping with the intent of this memorandum, the Parties agree that:

8.1. This MOU is effective from the date of signing.

8.2. They will act in good faith for the implementation of this MOU.

8.3. The MOU will be reviewed from time to time and may be amended at any time by the mutual consent of the parties.

8.4. Nothing in this memorandum shall encumber or fetter the mandate, authority, or responsibilities of either party in any way, or create legally binding obligations between the parties or their Members.

8.5. The parties will work together to encourage widespread understanding and support for the MOU.

8.6. A Party will provide not less than 30 days written notice of a decision to propose amendments to this memorandum and not less than 90 days of a decision to unilaterally withdraw from this memorandum.

AGREED TO THIS ______ DAY OF ________________, 2004 by

Shan Gardiner, President
BC & Yukon Chamber of Mines

Don Monsour, President
Council of Tourism Associations

Gary Livingstone, President and CEO
Mining Association of British Columbia

APPENDIX A

CONFLICT RESOLUTION

The Parties will encourage Members of their respective organizations to resolve potential conflicts by employing one or more of the following approaches to conflict resolution:

1. Dialogue and consultation between the affected Members;
2. Peer group consultation;
3. Mediation; and/or
4. Reference for conflict resolution through the Mediation and Arbitration Board.

Members wishing to avail themselves of Peer Group Consultation or Mediation with the assistance of the Associations must submit a written request for assistance to their respective Associations confirming their mutual willingness to seek assistance in resolving their dispute; their agreement to assume associated costs; their agreement to the selection of a conflict resolution mechanism as described below; and their agreement that recommendations made under either of these mechanisms will be made available to the executive of both Associations.

The Associations will review the request for assistance and the circumstances of each case in considering and recommending an appropriate course of action. The participation of an Association or its members in any form of conflict resolution is voluntary and an Association may decline to accept a request for assistance at its sole discretion if it determines that it is not in the best interest of its membership.

PEER GROUP CONSULTATION

- Members notify their respective Association of their desire to employ peer group consultation.
- The Associations appoint respective peer group members and arrange for onsite viewing/discussion of issues.
- Peer group undertakes assessment and develops a report containing recommended solutions for consideration by the Members.

MEDIATION

- The Members notify their respective Association of their desire to employ mediation.
- With the assistance of the Association the Members will agree upon a mediator.
- The mediator meets with the Members.
- The mediator considers the input received and based on this and any other information relevant to the issue provides recommendations for a resolution of the dispute for consideration of the parties to the dispute.

MEDIATION AND ARBITRATION BOARD

In the event that Members do not resolve their conflicts through consultation, peer group consultation or mediation, the Associations recommend that the Members pursue conflict resolution through the Mediation and Arbitration Board of British Columbia.

THIS LETTER OF AGREEMENT IS MADE the 7th day of June, 2004.

BETWEEN:

THE ST'AT'IMC, as represented by the **ST'AT'IMC CHIEFS COUNCIL**

(the "St'at'imc")

AND:

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA, as represented by the **MINISTER OF SUSTAINABLE RESOURCE MANAGEMENT**

(the "Province")

(collectively the "Parties")

WHEREAS:

A. On May 10, 1911 the *Declaration of the Lillooet Tribe* was signed by 17 St'at'imc Chiefs asserting that the St'at'imc are the rightful owners of St'at'imc territory and everything pertaining thereto, as generally shown on the map attached as Appendix "A" (the "St'at'imc Territory") to the Government-to-Government Protocol between the Parties dated for reference June 7, 2004 (the "Protocol").

B. Since the *Terms of Union, 1871*, the Province has assumed authority to make decisions with respect to land or resource use within the St'at'imc Territory.

C. This continued exercise of jurisdiction by the Province is a source of significant disagreement between the Parties.

D. The Province has advised that it wishes to release their Lillooet Land and Resource Management Plan on or before June 30, 2004 (the "LLRMP").

E. The St'at'imc advised the Province that consultation was required on the LLRMP, but the consultation process which the Province offered was unacceptable to the St'at'imc, who in turn suggested a government-to-government process for addressing land and resource use issues within the St'at'imc Territory.

F. The St'at'imc have begun preparing their Nxekmenlhkalha Iti Tmicwa (St'at'imc Land Use Plan), and the target date for making available a preliminary draft for that part of the St'at'imc Territory which corresponds with the LLRMP is <**insert**>, 2004.

G. The Parties have executed the Protocol, which includes creating a forum at which the Parties will seek to reconcile the LLRMP with the Nxekmenlhkalha Iti Tmicwa (St'at'imc Land Use Plan), and provides a workplan and budget towards achieving this goal.

H. The St'at'imc assert that Provincial decisions which authorize land or resource use within the St'at'imc Territory that do not conform with the Nxekmenlhkalha Iti Tmicwa (St'at'imc Land Use Plan) are *prima facie* infringements of their title and rights which require consultation and accommodation.

I. The Parties have different views on the scope and content of aboriginal title and rights and whether particular provincial decisions with respect to land or resource uses are *prima facie* infringements of such title or rights.

J. The Chiefs Council is comprised of representatives of the following communities:

Skatin: Skookumchuk
Samahquam
N'Quat'qua: Anderson Lake
Tsal'alh: Seton Lake
Sekw'el'was: Cayoose Creek
T'it'q'et: Lillooet
Nxwisten: Bridge River
Cacl'ep: Fountain
Ts'kw'aylacw: Pavilion
Lill'wat: Mount Currie

NOW THEREFORE IT IS UNDERSTOOD AND AGREED BY THE PARTIES THAT the Province will release the LLRMP, subject to the following conditions:

1. This Letter of Agreement will be appended to the LLRMP, and will be included in all copies of the LLRMP released by the Province.

2. The Parties acknowledge that the St'at'imc do not endorse the LLRMP.

3. The Parties acknowledge that the St'at'imc did not participate in the Province's public consultation process on the LLRMP.

4. The Parties acknowledge that the Province must meet the duties of consultation and accommodation, where applicable, prior to any potential infringements resulting from implementing the LLRMP or making decisions relying upon the LLRMP.

5. The Parties acknowledge that the LLRMP represents the Provincial Government's policy perspective on land and resource use.

6. The Province agrees that, prior to establishing its land or resource use objectives based on the LLRMP under Provincial legislation, including the *Forest Act*, the *Forest and Range Practices Act*, the *Park Act* and the *Land Act*, it will comply with legal obligations of consultation and accommodation with the St'at'imc, and will seek to reconcile the Parties' respective land use plans.

7. The Parties commit to immediately engage in the Strategic Land Use Planning discussions and negotiations under the Government-to-Government Protocol.

8. Nothing in this Letter of Agreement limits the legal or other positions taken, or that may be taken, by either Party in any court, tribunal or administrative proceeding, process, treaty negotiation or otherwise, regarding the scope or content of any aboriginal title and rights of the St'at'imc or whether a specific land or resource use approved by the Province is a *prima facie* infringement of such title and rights.

IN WITNESS WHEREOF, the Parties have signed this Agreement on the date first above written.

SIGNED in the presence of:	)	**ST'AT'IMC CHIEFS COUNCIL**, as represented by their Chairperson:
______________________________	)	______________________________
Witness	)	**Chief Garry John**
SIGNED in the presence of:	)	**HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA**, as represented by the Minister of Sustainable Resource Management:
______________________________	)	
Witness	)	
______________________________	)	______________________________
Witness	)	

Lillooet TSA Community and Forest Economic Interests

A coalition of community and forest economic interests including the Village of Lytton, The District Municipality of Lillooet, the Squamish Lillooet Regional District, the Thompson Nicola Regional District, Lytton Lumber Ltd., the Teal-Jones Group, Ainsworth Lumber Company Ltd. and the Province of British Columbia, as represented by the Ministry of Sustainable Resource Management

Memorandum of Agreement

PREAMBLE

The intent of this document is to clearly set out the general principles governing the relationships between the Parties, and to set out some basic understandings leading to the formation of an economic strategy for the Lillooet Timber Supply Area (TSA).

1. Parties to the Agreement

1. The communities of Lytton and Lillooet, Regional District representatives from SLRD areas A and B, and from the Thompson Nicola Regional District area I.
2. Forest based economic interests as represented by Ainsworth Lumber Company, the Teal-Jones Group and Lytton Lumber Ltd.
3. The Province of British Columbia, as represented by the Ministry of Sustainable Resource Management

Overall objectives of the communities of Lytton and Lillooet, the SLRD (A&B), and TNRD (I)

To assist the interpretation of this agreement the Parties have outlined their overall objectives for participating in the Memorandum of Agreement (MOA) as follows:

- To improve and maintain road and other infrastructure necessary to provide an industrial and tourism base of operations.
- To encourage local manufacture and sale of wood products using resources from within the Lillooet TSA.
- To identify and develop long term, meaningful employment opportunities for local residents.
- To identify and develop opportunities and investments to produce economic returns for local communities.
- To contribute to the development of a stable economy within the Lillooet TSA and to be a part of the continuing development of the local economy.

Overall objectives of the forest based economic interests:

- To develop and maintain long term mutually beneficial social and economic relationships with the Province and Lillooet TSA communities.
- To secure and independently develop the long-term access to forest resources required to operate wood products manufacturing businesses.
- To cooperate with communities in achieving their economic and social objectives outside the forest sector, where these objectives do not conflict with those of forest companies.

- To demonstrate consistent exemplary business conduct, ethics, standards and objectives.

Overall objectives of the Province of British Columbia:

- Sustainable economic development of land and resources in the Lillooet TSA.
- Complete priority strategic-level land and resource management planning and cost-effective implementation strategies in the Lillooet TSA.
- Undertake land and resource planning and associated projects (as outlined in the Implementation Plan) to address the use and management of Crown land and resources for sustainable economic development in the Lillooet TSA
- To develop and maintain long term mutually beneficial social and economic relationships with all communities and individuals in the Lillooet TSA.
- To assist communities in the Lillooet TSA in achieving their economic, environmental and social objectives where these objectives are in alignment with those of the Province of British Columbia.
- To manage the above objectives within the fiscal resources available to the Provincial government agencies.

2. Objectives of this Memorandum of Agreement

This is recognized as a framework agreement for the purpose of facilitating dialogue and joint identification of opportunities. Specific terms will be detailed in an Implementation Plan. The objectives of this MOA are:

- To jointly contribute to and participate in the development of the long term growth of the economy in the Lillooet TSA
- To jointly identify and assist business opportunities that may arise in all business sectors, including but not limited to forestry, tourism, viniculture, manufacturing, agriculture and mining
- To ensure access to government services in multiple areas to improve opportunities for all communities in the Lillooet TSA
- To conduct all discussions and information sharing with mutual respect and honour for one another, with an emphasis on good faith negotiations.

3. Implementation Plan:

Each identified opportunity for cooperation will be covered by the Implementation Plan. The Implementation Plan will specify all details of the specific undertakings, and will establish the obligations, conducts and liabilities of all parties signing the MOA. It will address short, medium and long term mitigation of changing land use impacts on communities and economic interests with specific recovery strategies.

The objective is to have the MOA negotiated and signed by _______2004, and the Implementation Plan agreed to by _______. Negotiation will be by the signatories of the MOA, with assigned people from each agency agreeing to the Implementation Plan, once the MOA is struck.

4. Preview of Potential Components of the Implementation Plan

Components of the plan will have projects attached to them, with timelines and persons responsible for specific tasks.

1. Commitment to a the application of available resources to satisfy the principles of the existing Timber and Economic Recovery Plan (TERP) through good faith application of available administrative tools, thereby providing relief to the timber undercut situation. This will include exploring opportunities to apply for new corporate and community licenses for beetle and undercut, community licenses for Bill 28 volumes, and the ability to access new opportunities in adjacent TSAs to satisfy current commitments through Section 18 transfers.
2. Assistance on municipal revitalization plans, including construction and maintenance of infrastructure.
3. Assistance with the development and evaluation of economic development proposals, including a business case to ensure that forest roads critical to community economic health are maintained.
4. Assistance on cross government initiatives within the Lillooet TSA, involving all Ministries but including specifically the Ministries of Transportation, Forests, the Attorney General, Energy and Mines, Agriculture, Fisheries and Food, CAWS, and Land and Water BC.
5. Priority participation in 2010 Olympic opportunities.
6. Assist in the development of local agriculture / viniculture opportunities.
7. Promote mineral exploration and mining in the Lillooet LRMP area using common sense boundaries. If the Geo Science Program receives additional funding by the provincial government, the Lillooet TSA will be considered a priority focus area.
8. Assistance with the evolution and marketing of current and long term tourism potential, including full public access to park and recreation areas[1].
9. Recognition of changes in the value of contributory lands in the TSA, through exploring the opportunity to establish a locally managed trust fund.
10. Long term commitment to the access of forest lands, and to the management of forest health, by ensuring that Lillooet is given fair consideration when allocating forest health funding.
11. Development of implementation and transition committee to implement and monitor LLRMP.
12. Assistance with accessing and maximizing government funding to continue to develop business partnership opportunities with First Nations, including items listed under the St'at'imc protocol, and to negotiate access to lands.

Attached is an appendix which lists specific commitments for Implementation Items. These are not meant to be comprehensive or replace MOA, just represent immediately funded commitments.

5. Terms and Maintenance of the MOA

This MOA shall remain in effect for five years, or as per the term required in the Implementation Plan for individual projects. Any party may terminate their participation in this MOA by giving written Notice of Termination to the other Parties at least 6 months prior to the end of a current term. The MOA may be renewed at the discretion of the parties.

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[1] This includes snowmobile access to Upper Slim, Lone Goat, the Hurley, Noel Creek and Fred/Antoine.

To maintain the effectiveness of this MOA the parties will meet at least quarterly (or more frequently as needed) to assess, discuss and confirm accomplishments and future priorities and direction.

Lillooet TSA Community and Forest Economic Interests
Memorandum of Agreement

6. *Without Prejudice*

This agreement dated this 28 day of June, 2004

On behalf of Lillooet TSA Communities

Greg Kamenka

Chris O'Connor

Russ Oakley

Mickey Macri

Barry Tait

On behalf of forest based economic interests

Brad Bennett, Ainsworth Lumber Co. Ltd.

Chris O'Connor, Lytton Lumber Ltd

for Brian Taylor, Teal-Jones Group

On behalf of the Province of British Columbia

"Original Signed by George Abbott" George Abbott, Minister of Sustainable Resource Management

Appendix
Implementation Items – Immediate Funded Commitments

#	Item	
1.	Quarterly progress and review meetings with the Minister of Sustainable Resource Management	
2.	LRMP implementation and coordination committee	$20,000
3.	Grizzly Bear monitoring and inventory[2]	$60,000
4.	Community tourism strategy	$25,000
5.	Access to FORREX expertise and capacity	$50,000
6.	Evaluation of IPP on Cayoosh Creek	$10,000
7.	RFP to develop resort lands adjacent to Lillooet TSA parks	$10,000
8.	Water Infrastructure plan for the Lillooet area	$40,000
9.	Section 18 transfer of cutting rights	$0

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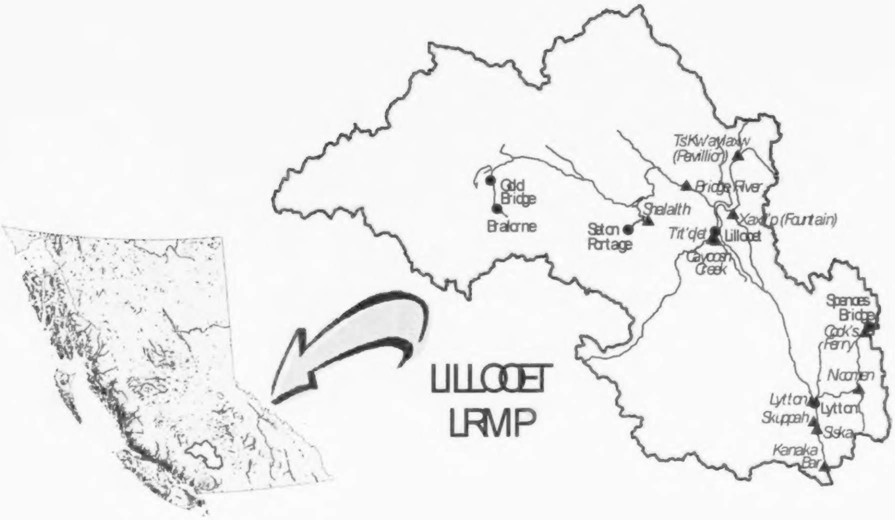
[2] MSRM will pursue 5 Year funding for Grizzly Bear work

DRAFT LILLOOET
LAND AND RESOURCE MANAGEMENT PLAN

Summary of
Socio-Economic and Environmental Implications


Ts'Kw'aylaxw (Pavillion)
Bridge River
Gold Bridge
Bralorne
Shalalth
Seton Portage
Xaxl'ip (Fountain)
T'it'q'et
Lillooet
Cayoosh Creek
Spences Bridge
Cook's Ferry
Nicomen
Lytton
Skuppah
Lytton
Siska
Kanaka Bar
LILLOOET LRMP

Ministry of Sustainable Resource Management
22 July 2004

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Draft Lillooet Land & Resource Management Plan
Summary of Socio-Economic and Environmental Implications

I. Introduction

The Lillooet Land and Resource Management Plan (LRMP) process began in November 1995 when a multi-stakeholder "table" was charged with the task of recommending to the provincial government a management plan for Crown land and resources in a 1.1 million hectare planning area in south western British Columbia. Between June 1996 and March 2001 the plan was developed by a round-table style of public committee (the LRMP "Table").

In October 2000, government gave the Table a March 2001 deadline to complete the plan. Since a full land use plan was not attainable, the Table adopted a phased approach. Phase 1 was to include recommendations on major land and resource management issues, including protected areas. Phase 2 was to refine management direction and develop strategies for plan implementation.

The Table was unable to reach consensus on a single land use scenario. In March, 2001, two groups (the Lillooet Communities Coalition and the Conservation, Recreation, Tourism and Community group) submitted separate recommendations to government, with the understanding that all Table members would support whichever option was accepted in its entirety.

In April 2001, government announced its approval in principle of recommendations from the Conservation, Recreation, Tourism and Community group. Following the May 2001 election, government reviewed the Phase 1 decision and directed the Ministry of Sustainable Resource Management (MSRM) to complete the LRMP. MSRM prepared two discussion drafts, drawing on the extensive work of the LRMP Table, as well as input from First Nations, the public and government agencies.

Following public consultation on the discussion drafts, MSRM revised the LRMP to reflect new results-based regulations (e.g., Forest and Range Practices Act) and new policies (e.g., working forest initiative; two zone system for minerals; Heartlands Strategy). Following consultations with First Nations, the draft will be revised and submitted to Cabinet for review and approval.

Socio-Economic and Environmental Assessment

This summary provides a preliminary assessment of the socio-economic and environmental implications of the draft Lillooet LRMP for the forestry, mining, and tourism and recreation sectors. MSRM's Guiding Principles (MSRM, 2003b) and Guidelines for socio-economic and environmental impact assessment (MSRM, 2004b *forthcoming*) discuss how impacts of a land use plan are to be assessed relative to a "benchmark" or "base case" scenario - the land and resource management regime that is most likely to be in place in the absence of a land and resource management plan. The analysis presented in this summary uses the Lillooet LRMP Socio-Economic &

Environmental Base Case (Robinson Consulting and Associates Ltd. et al., 2001) as the benchmark against which the LRMP is compared. That is, the LRMP is compared to the pre-2001 conditions (i.e., conditions in place before government established the Spruce Lake Order-in-Council). The analysis also draws on a September 2001 report detailing the socio-economic and environmental implications of the earlier Table proposals (MSRM et al., 2001). Additional analyses were conducted to supplement existing information, and these are noted in the discussion below.

II. Socio-Economic Implications

The socio-economic implications presented below were prepared by MSRM with the assistance of Robinson Consulting and Associates. The following is a summary of findings for the forest, mineral and tourism/recreation sectors.

A. Forestry

In 2001, the forest industry accounted for 19% of the employment (600 jobs) and 21% of the income ($25.2 million) in the Lillooet LRMP area (MMS, 2004). The major timber processing facilities are Ainsworth's veneer mill in Lillooet, Lytton Lumber's sawmill and value added facility in Lytton, and the value-added plant operated by Bridgeside Higa Forest Industries in Lillooet.

The AAC of tenures in the Lillooet LRMP area (equal to the Lillooet TSA) is 635,900 m^3. Harvest volumes over 1998-2002 averaged 443,000 m^3.

Based on this harvest level, the LRMP area has an estimated 300 person years (PY) of direct forest sector employment and a further 125 PY of indirect/induced ("spin-off") employment. In the province as a whole (including the LRMP area), the Lillooet area harvest is associated with 535 PY of direct employment and 600 PY of indirect/induced employment.

The LRMP area has almost all of the harvesting jobs and about 35% of the milling jobs associated with the harvest. Eighty percent of the indirect/induced jobs are outside the LRMP area, reflecting spending patterns of forest companies and workers. The recent harvest level has generated an average of about $3 million per year in stumpage revenue for the provincial government.

Timber Supply Impacts

Timber supply analysis of the impacts of the LRMP was prepared by Timberline Forest Inventory Consultants, in consultation with MSRM and MOF (Timberline Forest Inventory Consultants Ltd., 2004). The analysis built on work completed for the Timber and Economic Recovery Plan underway in the Lillooet TSA (Timberline Forest Inventory Consultants Ltd., 2003).

A "Pre-LRMP" scenario was compared with an "LRMP" scenario. In the "Pre-LRMP" scenario, the recommended protected areas (including the Spruce Lake area) contributed to the Timber Harvesting Land Base (THLB) and pre-LRMP management direction was assumed. In the "LRMP" scenario, the recommended protected areas were removed from the THLB and further reductions related to LRMP management objectives for spotted owl, grizzly bear, ungulate winter range, and visual quality (in so far as these can currently be assessed). Both scenarios included revised estimates of forest inventory, based on a recent MSRM study which concluded that volumes in existing natural stands had previously been underestimated by approximately 13% (MSRM, 2003a).

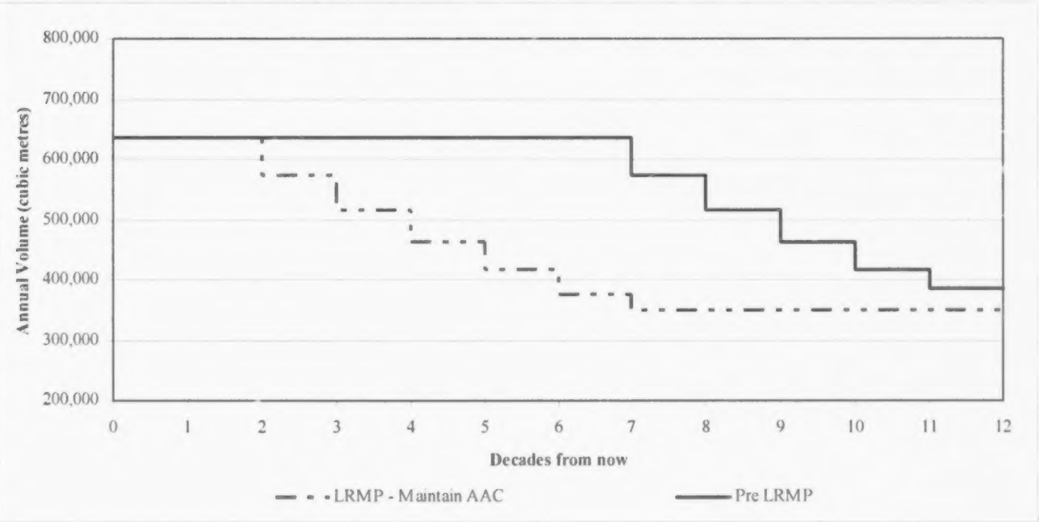
The analysis indicated that the LRMP would reduce timber supply overall by 11% (an average of 62,408 m^3/year). The overall impact is calculated as a proportional reduction to the harvest level across the planning horizon. The 11% overall impact comprises 8% due to THLB reductions for Protected Areas (Spruce Lake and 8 others) and 3% related to the management objectives for spotted owl, grizzly bear, ungulate winter range, and visual quality.

Further analysis by Timberline indicated how the 11% overall impact of the LRMP could occur over time (see "LRMP – maintain AAC" line in the graph below). The analysis follows Ministry of Forests modelling policy for harvest flow projections, which requires the current AAC to be maintained for as long as possible (to minimise short-term impacts), while limiting the harvest declines between decades to no more than 10% and maintaining a smooth transition to the long-term level.

In the "Pre-LRMP" scenario, harvest flow over time remains at the level of the current AAC (635,900 m^3) for 7 decades, then declines by 10% in each of decades 8,9,10 and 11, before reaching a steady long-term level of 384,900 m^3 in decade 12. By comparison, in the "LRMP" scenario the AAC level can be maintained for two decades, followed by 10% declines, reaching a long-term level of 349,900 m^3 in decade 8.

The actual impact of the LRMP on AAC will not be known until the Chief Forester makes an AAC determination that considers the LRMP as a higher level plan order (AAC determination due by 2007).

Lillooet LRMP Timber Supply Projections:



Employment and Provincial Government Revenue Impacts

Forest sector employment and provincial government revenue impacts of the LRMP, based on the timber harvest flows, are presented in the table below.

Decade		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12+**
Timber Supply Projections													
"Pre-LRMP"	*'000 m³*	636	636	636	636	636	636	636	572	515	464	417	385
	% Decline		0%	0%	0%	0%	0%	0%	10%	10%	10%	10%	8%
"LRMP"	*'000 m³*	636	636	572	515	464	417	376	350	350	350	350	350
	% Decline		0%	10%	10%	10%	10%	10%	7%	0%	0%	0%	0%
Timber Impacts	*'000 m³*	0	0	64	121	172	219	260	222	165	114	67	35
(Pre-LRMP - LRMP)	*Percent*	0%	0%	10%	19%	27%	34%	41%	39%	32%	25%	16%	9%
Employment Impacts (PY)													
LRMP Area	Direct	0	0	42	81	115	146	174	149	110	76	45	23
	Indirect/Induced	0	0	18	34	48	61	73	62	46	32	19	10
	Total	0	0	60	115	163	207	247	211	157	108	64	33
Province	Direct	0	0	77	147	209	265	316	270	200	138	82	42
	Indirect/Induced	0	0	86	164	234	297	354	302	224	154	91	48
	Total	0	0	164	311	443	562	670	572	425	292	173	90
Stumpage @ $6.82/m³	*($mil./year)*	$0.0	$0.0	$0.4	$0.8	$1.2	$1.5	$1.8	$1.5	$1.1	$0.8	$0.5	$0.2
	Present Value @ 3%	$0.0	$0.0	$0.2	$0.3	$0.3	$0.3	$0.3	$0.2	$0.1	$0.0	$0.0	$0.0

Note: Figures rounded to simplify presentation. LRMP area employment impacts calculated using coefficients of 0.36 PY per 1,000 m^3 for harvesting, 0.31 per 1,000 m^3 for processing, and 0.28 per 1,000 m^3 for indirect/induced. Provincial impacts (including LRMP area), were calculated using coefficients of 0.39 per 1,000 m^3 for harvesting, 0.83 per 1,000 m^3 for processing, and 1.21 per 1,000 m^3 for indirect/induced. PY coefficients for direct jobs are based on employment data in Lillooet TSA Timber Supply Review (MOF, 2001) and Lillooet LRMP Socio-Economic & Environmental Base Case (Robinson et al, 2001). PY coefficients for indirect/induced jobs are based on employment multipliers of 1.42 for the LRMP area and 2.12 for the whole province. The multipliers were derived from BC STATS economic dependency data (MMS, 2004) and data in the Lillooet LRMP Socio-Economic and Environmental Assessment of Phase 1 Framework Proposals: Final Report (MSRM et al., 2001).

No Impacts For Two Decades – There would be no impacts in the first two decades, as timber supply in both scenarios remains at the current AAC level.

Decline in Timber Supply Occurs Sooner – Under the LRMP, timber supply starts to decline 5 decades earlier than the Pre-LRMP scenario. In the LRMP area, in decade 3, the 10% (64,000 m^3) reduction in timber supply under the LRMP would be associated with an estimated reduction in direct forest sector employment of 42 PY, and a further 18 PY of indirect and induced employment. At the provincial level (including the LRMP area), the decade 3 impacts would be 77 PY (direct) and 86 PY (indirect/induced). The impacts presented are based on the assumption that the AAC is fully harvested.

Larger Impacts In Longer Term – Impacts would grow larger over the following decades, as the timber supply under the LRMP declines while the "Pre-LRMP" timber supply remains at the AAC level. (Note that deferring impacts for the first two decades means that later impacts would be larger than otherwise, i.e. if the harvest flow for the initial decades were lower, it would be possible to extend the lower level beyond 2 decades). The difference between the LRMP and Pre-LRMP timber supply begins to diminish after decade 7 as the LRMP timber supply is at the steady long-term level while the Pre-LRMP timber supply continues to decline before reaching a steady long term level in decade 12.

Stumpage Impacts – Stumpage would be unaffected for two decades. In decade 3 the provincial government would receive $400,000 less in annual stumpage revenue, $800,000 less in decade 4, and $1.2 million less in decade 5. However, as indicated in the table, the present value of the impacts is considerably lower.

Qualifications To Analysis – Estimates for periods beyond the second decade are subject to considerable uncertainty due to the changes that are sure to occur in market conditions, industry structure, technology, social conditions, and knowledge about the land base.

Fewer Impacts Relative To Current Harvest Levels - As mentioned above, actual timber harvest levels in the Lillooet LRMP area averaged 443,000 m^3 during the five year period 1998-2002. It is likely that the LRMP will result in improved access to the timber harvesting land base, so it is reasonable to conclude that the LRMP will result in somewhat higher levels of timber harvesting than would occur in the absence of the LRMP. To the extent that this occurred, the LRMP would lead to higher levels of employment and stumpage revenues. While it is not possible to accurately quantify future harvest levels, if harvests fall between the current five year average and the AAC, this would support about 300 to 425 direct forest sector workers in the LRMP area.

B. Tourism and Recreation

The Plan area's mix of climate, land forms and resources support a range of outdoor interests and opportunities. River rafting, fishing, hiking, trail riding, highway and off-road touring are popular summertime activities. Heli-skiing, ski touring and snowmobiling are popular winter recreational pursuits. Tourism is a large and growing part of the economy of the LRMP area. In 2001, Lillooet's tourism industry accounted for about 15% (458 jobs) of the Plan area's employment and 5% ($5.8 million) of the employment income (MMS, 2004).

The South Chilcotin area contains high value back-country commercial recreation and public recreation features. The land also supports an array of wildlife values. Relative to the base case (which assumes no new protected areas), the South Chilcotin area will be subject to a park management plan that will recognize its environmental values and promote orderly activity associated with commercial and public recreation uses.

With reference to commercial backcountry tourism and public recreation, the LRMP honours pre-existing rights and tenures in new protected areas, and accommodates historic uses (hunting, fishing, and certain types of recreation) that are compatible with protected status. These features are important to existing businesses, suggesting that current operations (hence employment and income) will continue. New investment in facilities and new entrants to the tourism industry will be subject to approval by BC Parks in the context of the respective management plan.

The LRMP designates three Mining/Tourism Permitted areas adjacent to the South Chilcotin Park where commercial forest harvesting is not permitted. A sub-regional management plan is to be formulated for addressing tourism and mineral development interests. The sub-regional plan may provide direction for managing conflict and competition among tourism/recreation interests, similar to a park plan. Given these considerations, the designation on these lands likely better protects tourism/recreation values than might be obtained under base case assumptions.

The Mining / Tourism Permitted areas are contained in the Spruce Lake OIC area; consequently, mineral development in these areas is currently prohibited. Considering the area's recreation/tourism values in isolation, the OIC boundary offers greater protection for tourism values than the mining/tourism designation under the LRMP.

In sum, the LRMP allocates a higher share of the plan area land base with important tourism/recreation values to a compatible management regime as compared to base case conditions. The LRMP also indicates a heightened awareness of tourism/recreation values on the lands subject to integrated resource management.

C. Mining

The LRMP area currently has two operating mining properties: the limestone quarry at Pavilion and the recently re-opened gold mine near Bralorne. At the 2001 Census, about 40 persons resident in the area were employed in the mining industry, accounting for about 2% of the area's employment (50 jobs) and employment income ($2.5 million) (MMS, 2004). This was a large increase from the previous census.

Historically, exploration and mining greatly contributed to economic development in the LRMP area and the province. The Bralorne area is the most prolific gold producer in the Province's history. In the LRMP area, land under mineral tenure fell almost 40% during the 1990s. Much of this reduction was attributable to forfeiture of tenure subject to the no staking reserve established over the Spruce Lake Study Area in 1994.

In 2003, exploration in the South-Central region of the province (which contains the LRMP area) was at its highest level in six years, and there are active exploration programs on several other properties in the LRMP area.

The following table compares the distribution of mineral indicators under the LRMP relative to the base case.

Distribution of Mineral Indicators in Lillooet LRMP Area

Indicator	Base Case	---------------------- LRMP	---------------------		% available in LRMP
		Proposed Protected Areas	All Resource Uses Permitted	Mining/ Tourism Areas	
Mineral Statistics (#)					
Current producers	1	0	1	0	100%
Past producers	31	0	31	0	100%
Developed prospects	22	0	22	0	100%
Prospects	52	3	44	5	94%
Showings	150	5	143	2	97%
Mineral Titles (hectares)					
Mineral Tenures	22,877	0	22,773	104	100%
Placer Tenures	560	0	560	0	100%
Crown Grants	12,098	506	11,102	490	96%
Mineral Potential (hectares)					
Metal: High	473,989	65,669	397,424	10,896	86%
Metal: Moderate to High	362,940	10,390	352,476	74	97%
Industrial: High	308,264	50,228	247,140	10,896	84%
Industrial: Moderate to High	485,080	25,814	459,192	74	95%

Note: Mineral potential statistics are based on data available as of June 2004. The Ministry of Energy and Mines is currently conducting an audit of this data.

The LRMP has been designed to provide mineral exploration and development opportunities while maintaining tourism/recreation opportunities and managing risks to environmental values. All the areas around current and past producers can be developed, as can the areas around 94% of existing prospects and 97% of existing showings. Eighty-six percent of high metallic mineral potential areas are available, as are 97% of moderate-to-high metallic mineral potential areas, 84% of high industrial mineral potential areas, and 95% of moderate-to-high industrial mineral potential areas. This represents a significant increase in mineral opportunity relative to the current situation in which the whole Spruce Lake OIC protected area is off limits to mineral exploration and development.

Relative to the base case (which assumes mineral exploration could take place throughout the area currently designated as a protected area under the Spruce Lake OIC), the LRMP results in a somewhat diminished probability of finding a mineral deposit. Overall, there is about a 15% reduction in the highest potential lands for discovering metals (e.g. gold, silver, copper) and industrial minerals, mostly a result of the recommended South Chilcotin protected area. However, compared to the current situation where the entire Spruce Lake OIC area is closed to exploration, the probability of locating an economic deposit is increased under the LRMP.

Adjacent to the proposed South Chilcotin park are three land units with high mineral potential, high tourism/recreation value, and areas important for managing access to the proposed park. Following the LRMP, a sub-regional plan will be developed with the objective of optimizing potential economic returns from these lands. This sub-regional plan must be flexible enough to maintain tourism opportunities while simultaneously signalling to investors that the area is open for mineral exploration and development. It should be noted that even if the area is available and is explored, a mine may not be developed due to external factors such as metal prices.

The tourism and mining sectors signed a Memorandum of Understanding in 2004. The MOU provides a framework for the two users of the Crown land base to address their potentially conflicting business interests and should contribute to investment security for both sectors.

III. Environmental Risk Assessment

An Environmental Risk Assessment of the Lillooet LRMP was prepared by Eliot Terry M.Sc., R.P.Bio. (Terry 2004) The following is a summary of findings.

Overall, the management objectives and measures developed by the Lillooet LRMP would pose less risk to environmental values than would the base case. Many of the LRMP provisions adopt current management practices (e.g., forest biodiversity), which may not provide adequate protection to maintain all elements of biodiversity (e.g., connectivity, seral stage distribution, small streams). In addition, risk will be reduced as some of the LRMP objectives for environmental values will become legal objectives under the Forest and Range Practices Act and/or the Land Act. As shown in the table below, the base case would involve high and high/moderate risk to almost all indicated environmental values, while under the LRMP these risks would be reduced in most cases to low/moderate levels.

The LRMP proposes THLB allowances which provide increased protection for mule deer, grizzly bear as well as Spotted Owl. How the budgets are spatially distributed will largely determine how effective they are at reducing risks. Some of the budgets may not be adequate to meet the landscape and stand level requirements (e.g., grizzly bear, Spotted Owl).

Risks to environmental values, especially near the proposed South Chilcotin park, will increase in the Integrated Management Area (IMA) if there is a significant increase in mineral exploration and development activities. Risks may be partly reduced through adhering to the management objectives and measures proposed for non-mineral resource values by the Lillooet LRMP as well as any future more detailed planning processes (e.g. Sustainable Resource Management Plans).

Environmental Value	Base Case (Management without LRMP)	Lillooet LRMP
Biodiversity ▪ Ecosystem Representation ▪ Riparian Habitat ▪ Red and Blue-Listed Species	• Significant gaps in ecosystem representation. • Mature and Old forest outside THLB as well as current practices (e.g., Riparian Reserve Zones, WTPs, OGMAs, IWMS 2004) partly reduces risks to some environmental values (e.g., water quality, fish habitat, certain red and blue-listed species). • S4-S6 streams remain vulnerable from development activities due to lack of riparian buffers. ➢ **RISK: High**	• Increased representation for provincially under-represented ecosystems. • Old growth is at greater risk in identified parts of the Plan Area. • Landscape and stand level biodiversity as well as riparian areas managed as in Base Case. • Risks to riparian values partially reduced as a portion of riparian ecosystems captured in proposed protected areas (PPAs). • Red and Blue-listed species managed as per current provincial policy (IWMS 2004)). ➢ **RISK: Moderate**

Environmental Value	Base Case (Management without LRMP)	Lillooet LRMP
Mule Deer	• 2.6% of mule deer winter range in existing PAs. ➢ **RISK: Moderate-High**	• Additional 2.7% of mule deer winter range allocated to PPAs. • Proposed management objectives and strategies (e.g., snow interception cover, access management provisions) and THLB allowance (6000 ha) suggest reduced risks to mule deer winter range over long term. ➢ **RISK: Low-Moderate**
Bighorn Sheep	• No sheep winter range/lambing areas in fully PAs. • Potential establishment of WHAs (IWMS) to protect portions of summer or spring ranges. • Lack of protection for winter ranges, as well as a lack of landscape-level direction to maintain connectivity between seasonal ranges (i.e. grasslands to alpine), suggest bighorn sheep remain vulnerable to resource and agricultural development over the long term. ➢ **RISK: Moderate-High**	• 6.8% of winter range/lambing areas allocated to PPAs. • Portion of known migration corridor captured in Yalakom PPA. • LRMP provides direction to restrict activity during critical lambing periods. • Management direction and PPAs suggest reduced risks to bighorn sheep habitat. ➢ **RISK: Low-Moderate**
Mountain Goat	• 8.3% of mountain goat winter/kidding range occurs in existing PAs (Stein and Duffey Lake Parks). • Increased road access into remote areas suggests mountain goats remain vulnerable over large areas. • Potential establishment of WHAs (e.g., kidding areas, IWMS) may provide some stand-level and site specific protection. ➢ **RISK: High-Moderate**	• Additional 6.8% of winter/kidding range captured in PPAs. • Portions of mountain goat habitat remain vulnerable to mining and tourism development in upper Slim Creek and Eldorado Mountain. • 1.2% of winter range captured in proposed Cayoosh Wildlife Management Area (WMA). • Measures that reduce the risks to mountain goats including forest cover constraints and seasonal restrictions during critical kidding periods. ➢ **RISK: Moderate**
Moose	• No moose winter range in PAs. • A relatively large proportion of moose winter range also occurs on the timber harvesting land base (59%), which suggests moose are at moderately high risk from forest harvesting activities over the long term. ➢ **RISK: Moderate.**	• 6.1% of moose winter range allocated to PPAs. • Management objectives for Moose Management Units and riparian areas (e.g., 67% retention) provide enhanced protection for moose. ➢ **RISK: Low-Moderate**

Environmental Value	Base Case (Management without LRMP)	Lillooet LRMP
Grizzly Bear	• 16% of Very High Conservation Priority Areas in existing PAs. • Although some stand-level management is expected (e.g., WHAs, buffering of avalanche chutes), lack of management direction from a Higher Level Plan poses increased risks to grizzly bears over the long term. ➢ **RISK: High-Very High**	• Additional 11% of Very High Conservation Priority Areas allocated to PPAs. • 1.0% also designated to the Cayoosh WMA. • 2.7% THLB allowance (8000 ha) reduces risks to critical grizzly bear habitat. Some uncertainty regarding how well the allowance will meet grizzly bear objectives in both Grizzly Bear Population Units (South Chilcotins and Stein/Nahatlatch). • LRMP provides general objectives, but lacks specific strategies and clear higher level plan direction needed to maintain landscape as well as stand level habitat requirements. • A lack of legally binding objectives contributes to uncertainty and estimated risk levels. However, Lillooet Grizzly Bear Working Group initiatives may partly reduce risks over time. ➢ **RISK: Moderate-High**
Spotted Owl	• No confirmed or Spotted Owl habitat (Long Term Activity Centres) in PAs. • Although other on-going initiatives (e.g., Spotted Owl Recovery Plan) in surrounding areas may help spotted owl conservation efforts, basic inventory information for this species within the Lillooet Plan Area is required before conservation strategies may be developed. ➢ **RISK: High**	• No Spotted Owl habitat (Long Term Activity Centres) designated to PPAs. However, small amount captured in Cayoosh WMA (108 ha) • Although the 1.7% (5000 ha) THLB allowance is an incremental benefit compared to the Base Case, it is unlikely it will meet Spotted Owl population management objectives over the long term. ➢ **RISK: Moderate-High**
Fisheries	• Existing habitat protection guidelines reduce impacts for some stream classes; however, small streams in upper reaches remain vulnerable. • Priority fisheries watersheds require enhanced riparian protection and watershed level assessments if risks are to be reduced over the long term.	• LRMP partly reduces risks to fisheries values over portions of the plan area due to the establishment of new parks which captures fisheries priority watersheds. • Other measures reducing risks to fish habitat include: commitment to address the needs of bull trout and white sturgeon which should reduce the risk to these vulnerable species compared to the Base Case. • Small streams remain vulnerable to development activities. • LRMP adopts current

	➢ **RISK: High**	riparian/fisheries management practices, which suggests risks to fish habitat will be reduced in parts of the Plan Area, but remain high in others. ➢ **RISK: Moderate**

IV. CONCLUSION

The LRMP will provide benefits to the forest sector in the form of greater land use certainty, faster approval of forest development plans, support for product certification initiatives, and improved relationships with community stakeholder groups and First Nations. There would be no timber supply impacts, forest sector employment impacts or government stumpage revenue impacts for two decades. There would be longer term impacts after the first 2 decades. It is likely that the LRMP will result in improved access to the timber harvesting land base and this could result in higher levels of timber harvesting, and associated employment and government revenues, than would occur in the absence of the LRMP.

The LRMP has been designed to provide mineral exploration and development opportunities while maintaining tourism/recreation opportunities and managing risk to environmental values. Taken together, the resolution of the South Chilcotin issue, focused efforts to implement the Two Zone System, and industry-led initiatives (e.g., the Mining-Tourism MOU), will improve land use certainty locally and across the province and, consequently, the attractiveness for investment in mineral exploration in the LRMP area.

The LRMP allocates a higher share of the plan area land base with tourism/recreation values to compatible management regimes as compared to base case conditions. The plan also indicates a heightened awareness of tourism/recreation values on the lands subject to integrated resource management.

The Lillooet LRMP would decrease the overall risk to environmental values. Without the LRMP there would be high and high/moderate risk to almost all indicated environmental values, while under the LRMP these risks would be reduced in most cases to low/moderate levels.

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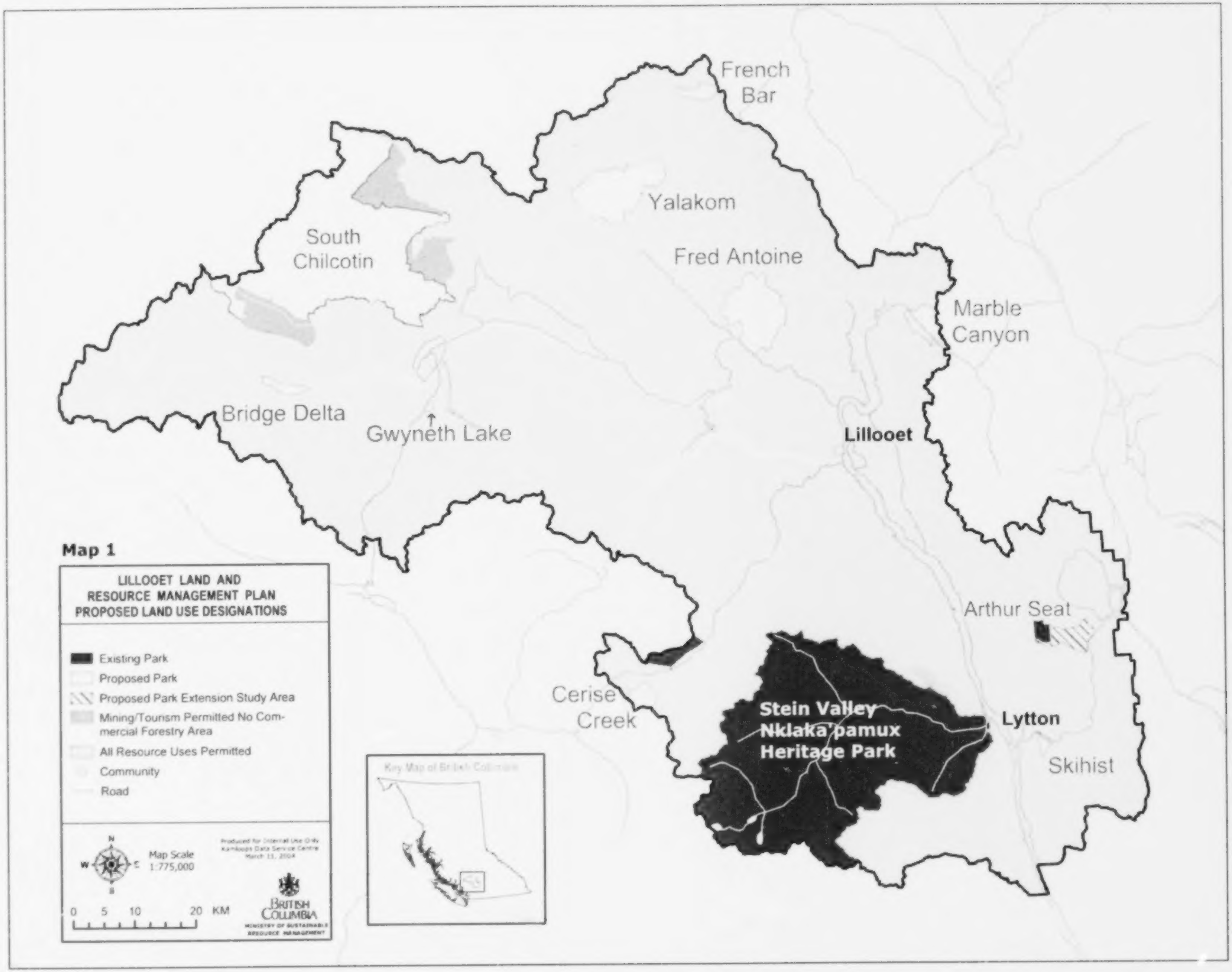
Map 1


LILLOOET LAND AND
RESOURCE MANAGEMENT PLAN
PROPOSED LAND USE DESIGNATIONS
Existing Park
Proposed Park
Proposed Park Extension Study Area
Mining/Tourism Permitted No Commercial Forestry Area
All Resource Uses Permitted
Community
Road
N
W
E
S
Map Scale
1:775,000
0
5
10
20
KM
Produced for Internal Use Only
Kamloops Data Service Centre
March 11, 2004
BRITISH COLUMBIA
MINISTRY OF SUSTAINABLE RESOURCE MANAGEMENT
Key Map of British Columbia
French Bar
Yalakom
Fred Antoine
South Chilcotin
Marble Canyon
Bridge Delta
Gwyneth Lake
Lillooet
Arthur Seat
Cerise Creek
Stein Valley Nklaka'pamux Heritage Park
Lytton
Skihist

BRITISH
COLUMBIA

BACKGROUNDER

2004SRM0026-000591
July 22, 2004
Ministry of Sustainable Resource Management

CONSENSUS MOVES MORICE LAND USE PLANS TO NEXT STAGE

MORICE AREA

- 15,000 square km lying north of Tweedsmuir Park, including the communities of Houston and Granisle
- Population approximately 5,200
- Heavily dependent on forestry (almost 60 per cent of employment base), followed by mining, tourism and agriculture

Planning Process

- Land and resource management planning began in September 2001.
- Fifteen sectors and two First Nations made up the planning table.
- Planning consensus reached in March 2004.
- Cabinet has approved moving forward with the next stage of the planning process.

First Nations Involvement

- First Nations with an interest in the area include the Office of the Wet'suwet'en and the Lake Babine, Carrier Sekani, Cheslatta and Yekooche First Nations.
  - The Office of the Wet'suwet'en and the Lake Babine Nation, in combination, claim the entire plan area as traditional territories.
- The Office of the Wet'suwet'en and Lake Babine Nation participated directly at the planning table (Lake Babine withdrew in June 2003 after a change in leadership).
- The other three First Nations decided not to participate.
- The office of the Wet'suwet'en prepared a Territorial Stewardship Plan; many of its key elements are part of the consensus recommendations from the table.
- Government is negotiating a protocol with the Lake Babine First Nation for government to government discussions on the proposals.

Next Steps

- Government to government discussions with the office of the Wet'suwet'en and Lake Babine Nation to develop final draft land use designations and zoning.
- Cabinet reviews plan and makes final land use decisions in Open Cabinet.
- Government designates final protected areas.

Land Use Designations Recommended by Planning Table

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Table 1. Proposed land use designations for the Morice area

Zones/Areas (see map for detail)	Allowed Uses	Hectares
Current Parks and Protected Areas	Red Bluff, Topley Landing (Babine Lake Marine) Park, Little Andrews Bay Marine Park, Morice River Ecological Reserve	563 .04% of region
Proposed Parks/ Conservancy	No mining or forestry, emphasis on tourism, recreation, conservation, and First Nations traditional activities	96,246 6.4% of region
Proposed Tourism/Mining Permitted: No commercial forestry or hydro	Mining and tourism permitted; no commercial forestry or hydro	306,916 20.5% of region
Proposed All Resource Uses Permitted	All uses - including tourism, forestry, mining, hydro	960,699 64.1% of region
All Resource Uses Permitted – Specific Values Identified	As above, except limitations on some activities (e.g. motorized recreation use, settlement)	135,582 9.0% of region

Socio-Economic and Environmental Impacts of Recommendations

- In the long term, harvestable timber supply reduced by 7.4 per cent - no immediate impact on allowable annual cut and forest employment.
- Innovative forest management practices may reduce long-term economic impacts on forestry.
- Significant benefit to guide outfitting, guided angling, other commercial tourism and non-commercial recreation.
- Maintains access for 95 per cent of high-potential mineral exploration and development areas.
- Reduces environmental risk for all key wildlife species, including grizzly bears, caribou and mountain goat.
- Improves protection for rare ecosystems, freshwater shorelines and fish habitat.
- Brings forest age structure and species range closer to natural levels.

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BACKGROUNDER

2004SRM0026-000591
July 22, 2004

Ministry of Sustainable Resource Management

LILLOOET PLAN BRINGS LAND USE CERTAINTY TO REGION

Lillooet Area

- 11,000 square kilometres including the communities of Lytton, Lillooet, Spence's Bridge and Bralorne
- Primary economic activities are forestry, tourism, agriculture and mining
- Population almost 6,500

Planning Process

- Land and resource management planning began in 1995
- Limited engagement by First Nations in planning process
- Interim decision just before the 2001 election established the Spruce Lake Protected Area in the South Chilcotin over the objections of the community and other sectors
- In Fall 2001 the province committed to returning to the community and stakeholder groups to try to resolve issues between the mining, tourism and conservation sectors on key details of the plan
- The ministry also began consultation with some First Nations in the area
- Government-to-government protocol with the St'at'imc First Nation signed in June 2004
- The ministry has also signed LRMP consultation agreements with the Mount Currie and Esketemc First Nations
- Agreement was reached with communities on a Memorandum of Agreement for co-ordinating economic activity
- Government has approved moving forward with the next stage of the planning process – consultations with First Nations on land use designations and zoning

First Nations Involvement

- 28 First Nations bands have traditional territory in the area
- The government to government protocol and letter of agreement with the St'at'imc First Nation will guide discussions with member bands
- Government will consult with other First Nations before approving and implementing a final plan

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Next Steps

- Consultation with First Nations to develop final plan details
- Cabinet reviews plan and makes final land use decisions in Open Cabinet
- Government designates final protected areas

Land Use Designations Recommended

Table 1. Proposed land use designations for Lillooet area

Zones/Areas (see map for detail)	Allowed Uses	Hectares
Current Parks	Stein Valley, several small parks	110,673 10% of region
Proposed Parks/Conservancy	No mining, emphasis on tourism infrastructure and First Nations traditional activities. Grazing permitted	82,416 7% of region
Tourism/Mining Permitted:	No commercial forestry or hydroelectric dam development. Emphasis on tourism and mining	14,617 1% of region
Proposed All Resource Uses Permitted	All uses - including tourism, forestry, mining and hydro	917,636 82% of region

Summary of socio-economic and environmental impacts

- Creation of 56,500 hectare South Chilcotin protected area with intent to move it to Class A park status.
- A 14,600 hectare tourism/mining area that will exclude commercial logging (part of previous South Chilcotin protected area).
- Eight other new parks.
- Total parks/protected areas will be 193,098 hectares – 17.25 of total plan area.
- Protection of key grizzly bear habitat; continued ban on grizzly bear hunting to meet plan target of doubling grizzly population to 182 animals.
- Reduced environmental risk to spotted owls, grizzlies and other wildlife.
- Access available to high-potential mineral sites.
- Positive impact for recreation and tourism.
- Current forest harvest rate is below allowable levels; Timber and Economic Recovery Plan will support increased forestry activity and employment.
- Increased First Nations involvement in economic opportunities, based on the plan.

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